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Indiana Population Projections to the Year 2020

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Indiana Population Projections to the Year 2020

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Perhaps no other single research activity undertaken by the Division of Research is as important as projecting population. Businesses and governments alike use these projections to make capital investment decisions about Indiana which shape the state's future for decades. They can advance prosperity or retard it. To the extent that projections of population are influential, they deserve the most careful attention.

In this issue the results of 27 months of careful research are reported. Detailed examinations of the births, deaths, and migration of 19 different age groups and both sexes for each county lie behind the results published here.

These pages explain, in brief, the methods used to make these projections. Some of the findings are summarized here; the more detailed, formal publication is available from the Board of Health. Persons or agencies requiring more detail should contact the State Board of Health for the volume, *Indiana County Population Projections, 1985-2020.*

Morton J. Marcus
Editor

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Introduction, **Robert A. Calhoun, Director of Public Health Statistics, Indiana State Board of Health**

Methodology, **Joel C. Webster, Research Associate, Division of Research, Indiana University**

Summary of the Results, **Morton J. Marcus, Research Economist, Division of Research, Indiana University**

Introduction

This is the fourth major population projection series developed by the School of Business in the past 20 years. The first, in 1966, was produced for the Indiana Department of Commerce; the other three (in 1976, 1978, and 1983) are part of a continuing, cooperative projections program with the State Board of Health.

As was the case with the previous three efforts, this 1983 series is demographic in nature, in that it is based on the fertility, mortality, and migration experiences of residents of Indiana and its counties. Thus it reflects what may be expected to happen to our population if fertility, mortality, and migration remain essentially the same. This, of course, may not be what happens.

For the past 25 years, Indiana's population has declined, primarily because of lower fertility, but also because of a switch from net inmigration to net outmigration. This has been reflected in the projected populations for 1985 and 2000:

	1985	*2000*
1966 Series	6,268,200*	No projection
1976 Series	5,828,600	6,582,100
1978 Series	5,584,700	6,061,000
1983 Series	5,568,000	5,855,500

*Lowest of 3 projections made in 1966 Series.

No projections beyond 2000 were made in the previous series, but the new figures show growth after 2000 to be decelerating, basically because of an aging population. As the median age increases from 29 in 1980 to 38 in 2020, fewer births and more deaths can be anticipated, resulting in lower natural increase (births minus deaths). This phenomenon is not peculiar to Indiana; natural increase in the United States is expected to reach zero before the middle of the next century.

Other highlights of the new series include:

- An Indiana growth rate from 1980 to 2020 of 11.1 percent (less than half the anticipated national growth rate of 29 percent);
- A sharp decline in the population under 20;
- Major increases in population over 40, and specifically that over 65;
- Little change in the population of central metropolitan counties;
- Continued rapid, but slowing, growth in suburban counties;
- Slow growth in the rural areas, continuing the pattern developed in the '70s after a century or more of decline.

No series of projections can be expected to depict the future exactly. Projections merely continue past trends into the future, modified, albeit slightly, by the judgment of the researchers. These projections are offered as a starting point for planning rather than as a statement of conclusions. Actions taken in the next few years by individuals, corporations, and governments will change the course of the future. Still, we may expect that the general outlines of the future will resemble those depicted in these pages because population dynamics do take long periods of time to alter course.

These projections are single-valued rather than a range of alternative assumptions. The investigators did consider many alternatives and together concluded that the most useful set would be that described by the methodology presented in the following section. We are prepared to investigate alternative assumptions and to reexamine the data for individual counties where convincing arguments can be developed. We will be doing just that in the years ahead in an effort to improve the work presented here.

Methodology Used to Project Population

There are two primary approaches to population projections: the econometric and the demographic. In the first, some simulation model of the economy might be used to project factors, such as employment and income, which are thought to affect both migration and birth rates. From those factors it is therefore possible to derive some information regarding possible future populations. This approach contrasts with the demographic, which directly utilizes patterns of birth, death, and migration to project population. Although the econometric approach may be more comprehensive than the demographic approach, it is more complex and has not yet equalled the demographic approach in long-term forecasts. Since the 1983 IU/SBH series is a long-term forecast, a demographic approach was selected.

Within the demographic approach, one of two primary methods can be selected to predict population: forecasting and projecting. In a forecast, extensive judgmental changes are applied to the current patterns of population growth or decline. These judgments may incorporate possible economic, social, or environmental factors which have not yet been reflected in historic population patterns. For example, an expert might be convinced that the ice caps will melt in 1999. Although this has not happened in the recent historical past, it would have significant impact on patterns of birth, death, and, particularly, migration. The forecasting approach is more flexible than the projection method and could prove more accurate, provided that the judgment of the expert is also accurate. Unfortunately, the more judgmental decisions such a model requires, the more certain it is that some will be wrong. A projection method is more strictly linked to the patterns of the past, and only those changes in the economy, society, or environment which have already made themselves felt in measured demographic changes apply to the projections. It was this method which was selected for the 1983 IU/SBH projections.

The essential method by which a demographic approach projects population is quite simple. It can be expressed as the following equation:

$$\text{POP(new)} = \text{POP(old)} + \text{births} - \text{deaths} + \text{inmigration} - \text{outmigration}$$

where POP(new) is the new base population and POP(old) is the population of the earlier projection period. In the IU/SBH projections, the population is divided into 3496 pieces (or cohorts): 92 counties, each with 2 sexes (male, female), classified into 19 age categories. The printed version showed only 18 age categories, one for those 0 to 4 years old, one for each five-year age increment to age 84, and then one category called 85+. The projection model itself used 19 age categories. The age 0 to 4 was divided into two categories, age 0 (under 1 year old) and age 1 to 4. This was to take into account the very wide difference in mortality rates between children under 1 year and older children. Each of these cohorts was computed independently, and then summed to get county totals.

This equation became even simpler due to the lack of information regarding migration flows. Although no information existed which provided inmigration rates and outmigration rates for each cohort, it is possible to compute a value of net migration (the difference between inmigration and outmigration for a cohort). This is because birth and death data as well as census population counts are available. Net migration is theoretically equal to the following equation:

$$\text{Net Migration} = (\text{POP(old)} + \text{births} - \text{deaths}) - \text{POP(new)}$$

where POP(new) is the 1980 census count, POP(old) is the 1970 census count, births is the number of births between 1970 and 1980 (April 1 of those years) and deaths is the number of deaths for that intercensal period. Dealing with individual cohorts is somewhat more complex than this. First, the 1970 population has aged 10 years during that period. Second, births will increase population only in the ages 0 to 9 years. Third, deaths vary greatly from cohort to cohort.

In the IU/SBH projections, five-year rates of fertility, mortality, and net migration were computed for each of the 3496 cohorts and then applied to the 1980 base population obtained from the census. The resulting distribution of population then became the base population for the next five-year projection. This was repeated eight times, thereby projecting population to the year 2020. Some modifications were made to the net migration figures due to known anomalies in the 1970 census. These are described below. Nevertheless, the basic projection process was a simple simulation of the process we have described.

Although the 1983 IU/SBH series was intended to be a conservative projection set rather than a forecasting or scenario approach, it is impossible to avoid making assumptions about the future. A projection assumes that there will be neither cataclysms nor bonanzas during the period of projection. The following assumptions were made for the period 1980 to 2020:

- Death rates by age, sex, and county will remain identical to the 1979-1981 rates. (It is true that mortality for a particular cohort during 1979-1981 tended to be lower than mortality for that cohort during any other period of history. However, that decrease is the result of a fairly steady decline in mortality rates for several decades.) The steady-state assumption was chosen for two reasons: (1) simplicity, and (2) because mortality rates have been leveling off in the industrialized nations of Western Europe, which tend to lead the United States slightly in this respect.

If mortality rises back toward rates seen before this period (perhaps due to declining levels of health care or environmental degradation), then the population of Indiana would be smaller in number and younger in age than the projection series would indicate. If mortality rates continue to drop from the 1979-1981 levels (perhaps due to greater concern with good health or advancing medical technology) then the population of Indiana would be larger but older than this projection series indicates.

- Birth rates by age of mother, sex of child, and county will remain identical to the rates seen in the 1979-1981 period.

Fertility rates in the 1979-1981 period were at historical lows. In terms of lifetime fertility, the average female in 1979-1981 could be expected to have about 1.9 children over her lifetime. In 1957, the year of peak fertility, the average female was expected to have about 3.9 children during her lifetime.

If fertility continues to drop from the 1979-1981 rates, the population in Indiana will be substantially smaller and older in 2020. If fertility should rise again, population in Indiana will be much larger and younger than projected in the current series. A multiplying effect occurs with regard to projected changes in fertility, as the projections are over a long enough period that children yet unborn reach childbearing age themselves well before the projections terminate.

The constant rate assumption was selected for the following reasons: (1) simplicity and (2) compatibility with most national projections which usually assume either steady rates or a very slight additional decline.

- Enrollment by age and sex will remain constant at Indiana University at Bloomington, Purdue University at West Lafayette, Ball State University at Muncie, and Indiana State University at Terre Haute.

This assumption was necessary; long-term enrollment projections were not available and large institutional populations have profound effects on the county in which they are located. Such institutions were therefore treated separately from the counties in which they are located and only added in at the end of each projection period. This assumption can also be justified if one believes that the major state educational institutions will draw additional enrollment either from smaller institutions or by different admission procedures or educational programs which tap a larger segment of the population.

- Migration rates are based on the 1970 to 1980 experience. The simple theoretical method described above was inadequate for several reasons. The most important was that methodology improved between the two censuses, which caused an additional five million people to be counted nationally in the 1980 census. The second was known changes in the society in which the censuses were conducted, notably the end of the Vietnam conflict and the corresponding reduction in social unrest, military forces, and civil disobedience. The following changes were applied to that experience:

(a) Migrations were adjusted to account for the male populations involved in the military in 1970. For example, a male in the military in 1970 who was nevertheless located within the United States was counted as being a resident of the state in which he was stationed rather than his home state. Also contained within this adjustment was a probable underreportage of young males of draftable age.

(b) Migrations were adjusted to account for an apparent undercount of student populations in 1970. For example, Indiana University in 1980 had a reported enrollment almost identical to the census count of enrollment. Throughout the '70s, IU enrollment appeared almost constant. However, in 1970 there was a very great discrepancy between the census count and the university count. The university count, however, was fully compatible with the other counts throughout the decade and with the 1980 census. It was therefore decided that the university enrollment counts were actually superior to the 1970 census counts. Therefore, the 1970 census counts for the counties in which such institutions are located were adjusted to eliminate discrepancies between university counts and the census of 1970. This made corresponding changes in migration estimates.

(c) Extreme migration rates for particular cohorts were adjusted to more normal values. A statistical analysis located migration rates which were more than two standard deviations away from the mean migration rate for that cohort at the state level. These outliers were then moved back to the closest boundary value. This was judged to be necessary for migration but not for births or deaths because of the much larger expected errors in migration rates. Birth records and death records are kept very carefully and it is doubtful if there is a mean error of even 1% in any cohort. The 1980 census was also very precise and it is doubtful if there were any large miscounts for any cohort. The 1970 census had a substantial undercount, perhaps 2% of the population. Net migration is a much smaller value than base population, and *all* the unaccounted-for error transfers to that smaller, residual number. Even if the adjustments described above accounted for 90% of the total undercount, the error, when applied to net migration at the state level, is not .2% but around 10% since the base population is over five million and net outmigration was around 100,000. When such possible inaccuracies are applied to individual cohorts in specific counties, the potential for misleading migration rates is very high unless extreme values are controlled.

(d) Cohorts with net outmigration would continue to migrate outward at 1970-80 rates, but cohorts with net inmigration would experience reduced rates of inmigration. Specifically, during the 1980-1985 projection period, cohorts with net inmigration have rates only .6 of those calculated for the 1970-1980 period applied to them. This decision was a consequence of one fact and one speculation. First, although unadjusted migration rates gave net outmigration rates of about 55,000 for the state during the period 1980-1985, preliminary census estimates of migration indicated that 107,000 people on balance left the state in just the period 1980-1982. To make the projections generally compatible with this result required that migration rates be adjusted somehow so as to increase the net outmigration for the state as a whole. In general, this could be done by raising outmigration rates but leaving inmigration unchanged, raising outmigration a lesser amount and dropping inmigration, or leaving outmigration unchanged but dropping inmigration rates substantially. After much thought and analyses of all these possibilities, we decided to select the third. We speculated that moving is a difficult decision and that the number of people (total) who move will not appreciably increase during periods of economic stress. However, among the people who do decide to move, such stress results more often in moving out of the state altogether rather than relocating within the state. When applied to net rates for individual cohorts, this would have the effect of making outmigration rates a little higher but inmigration rates substantially lower.

(e) The difference between inmigrations and outmigrations mentioned in (c) will disappear by 2000. It was decided that it would be unduly pessimistic to assume that the conditions seen in Indiana in the period 1978-1982 would persist indefinitely. If the economic stress in the state became less, the reduced inmigration rates would again tend to approximate the 1970-1980 pattern relative to outmigration rates.

(f) Both inmigration rates and outmigration rates would decline over the projection period to a value only 1/64th of the 1980-85 rates in the 2015-2020 projection.

This is due to two reasons: (1) since migration rates were the demographic component about which great doubt persists, it was reasonable to give it less importance as the projections extended further into the future; and (2) in a situation in which some cohorts have net inmigration and others have net outmigration, the relative importance of those cohorts is not constant. Specifically, in each projection period, the cohorts which had net inmigration constitute a larger and larger portion of the whole. This effect can compound over several projection periods to yield extraordinarily implausible results. Indeed, if a state had only a single region with overall net inmigration and the projection was extended far enough, that state would eventually show explosive growth, all of which was in that single region.

The regions showing the greatest inmigration during the seventies were suburban counties. This was certainly due largely to migration from the adjoining urban counties. When migration rates are left unadjusted and applied mechanically to the appropriate cohorts, the growth in the suburban counties quickly exceeds the outmigration from the urban center by many times. Before the end of the projections, the pattern of population distribution is entirely twisted, with densely populated suburban counties surrounding comparatively empty central counties and those suburban counties growing at astronomical rates. This is clearly unlikely. Such compound interest effects were therefore controlled by fitting migration rates to a declining quadratic curve.

The methodology and assumptions described here are both simple and flexible. Alternatives are clearly possible. These have the advantage of replicating a known past with only modest adjustment for technical reasons. The great value of these assumptions is that they tend to provide projections of a baseline nature. As changes in fertility, mortality, or migration occur, it will be possible to measure the extent of that impact on the population of Indiana with greater clarity than if more "imaginative" approaches had been undertaken here.

Summary of the Results

Indiana's population is projected to increase throughout the next four decades, reaching a total of 6,101,000 in the year 2020. From 1980 to 2020 the state's population will grow by more than 610,000 persons, an 11.1% increase. During the same forty years, the national population has been projected to grow by 29%.

In each decade until 2020, the magnitude of growth as well as the rate of growth is expected to decline. (See **Table 1**.) Although the state's population grew by 296,500 (5.7%) in the 1970s, the growth for this decade will be only 60% of that, some 183,700. During the next three decades, the number of persons added to the Hoosier population will decline. In sum, the total increase projected for Indiana in the next forty years is less than the 727,800 persons added to the state population in the 1950s. These additions to the population of the state are shown graphically in **Figure 1**.

Table 1

Indiana's Population Change for Decade Ending:

	Number	*Percent*
1910	184,400	7.3
1920	229,500	8.5
1930	308,100	10.5
1940	189,300	5.8
1950	506,900	14.8
1960	727,800	18.5
1970	531,200	11.4
1980	296,500	5.7
1990	183,700	3.3
2000	181,600	3.2
2010	146,700	2.5
2020	98,800	1.6

If the State of Indiana experienced population change through natural increase alone (an excess of births over deaths), then 910,000 would be added to the state's numbers by the year 2020. But since people are free to move where their interests and opportunities are best served, a net migration of population from Indiana is projected. It will decline over time, but will nonetheless result in a net loss of 301,000 persons, reducing the state's potential growth by one-third. (See **Table 2**.) An analysis of these data indicates that two-thirds of that net outmigration will occur in this decade. Of the 202,000 net outmigrants in this decade, 111,000 (55%) will be persons age 20 to 29.

The aging of the state's population is shown in **Table 3**. In 1980 a third of the people of Indiana were under age 20; by the year 2020 less than a quarter of the population will be in this youthful bracket. Where one in five Hoosiers was age 40 to 59 in 1980, the ratio will rise to one in

Table 2

Indiana
Components of Change: 1980-2020

Births	3,182,000
Deaths	–2,272,000
Natural Increase	910,000
Net Migration	–301,000
Change	609,000

Table 3

Indiana:
Age Distribution

Age	*1980 Percent*	*2020 Percent*
0-19	33.4	24.9
20-39	31.4	27.4
40-59	20.2	25.2
60-79	12.7	19.4
80 & up	2.3	3.1
Total	**100.0**	**100.0**

Table 4

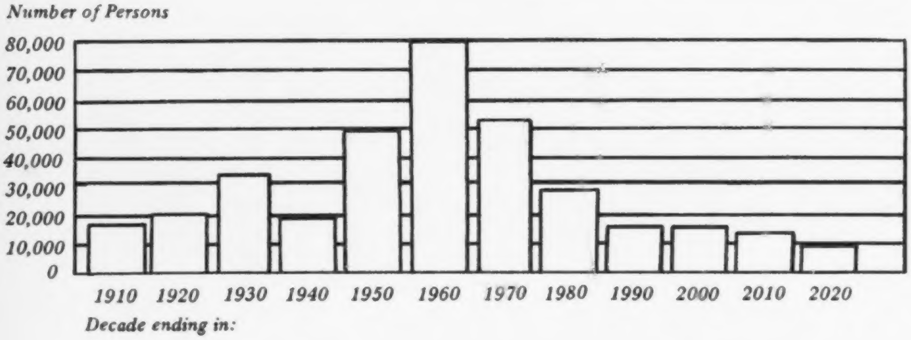
Indiana:
Shifts in Age Groups: 1980 to 2020

Age	*2020 Number*	*Change Number*	*Percent Change From 1980*
0-19	1,521,940	–314,340	–17.1
20-39	1,669,530	–55,590	–3.2
40-59	1,536,400	426,720	38.4
60-79	1,184,620	489,950	70.5
80 & up	188,510	63,990	51.4
Total	**6,101,000**	**610,800**	**11.1**
20-29	847,650	–133,870	–13.6
30-39	821,880	78,280	10.5

four. The state will become more middle-aged. The median age of the population will rise from 29.2 to 38.3 years. The number of those under 30 will decline and those older than 30 will increase. In Table 4 the change in population by age is shown, with special attention at the bottom of the table to the group 20 to 39. Some may note that the decline in the number of young persons implies decreasing enrollment in primary and secondary schools. Others may find the increase in the numbers 85 and older a matter of concern to nursing homes in the state. Particular attention should be paid to the fact that the greatest numeric increase will occur in the population age 30 to 59, which will grow by 505,000 persons. By the year 1990, all of these persons will have been born. The oldest in that group was 19 years old in 1980. This cohort will pass through our schools and into the labor force during the period of these projections. They will be the ones most subject to the lures and temptations of migration. In fact, if the economic prospects of the state were to improve, it is likely that their numbers would be greater than those shown in Table 4. In addition, if they tend to stay in the Hoosier state, they will have their children here and the decreases shown in the younger age groups will be lessened. Finally, this mature, productive part of the labor force constitutes the growth market of the future. Firms and governments alike with an eye to the future would do well to concentrate attention here on the population born between 1961 and 1990.

The baby boom which followed the Second World War is represented in these numbers in the cohort which will be 60 to 79 in 2020. Here is found the largest percent increase in population. Their well-being, their level of savings, and opportunities will be determined in part by the economic conditions they face in the next forty years. They can be a strong contribution to a changing Hoosier society as they move from the ages 20 to 39 in 1980 to a mature and potentially secure older age.

Figure 1
Change in Population of Indiana



County Level Detail

At the county level, the changes in Indiana's population appear even more dramatic because of the wide differences among the 92 counties of the state. (See Table 5.) Marion, Lake, and Allen will still be the three most populous counties in the state, but whereas they had 1,582,600 of the state's 5,490,200 persons (28.8%) in 1980, their share will slip to 26.3% in 2020. Lagrange county will show the greatest percent growth, 73.4%, with Porter having the greatest amount of growth, 71,100 persons. In all, 77 of the state's 92 counties are projected to increase in population, with the remaining 15 declining in numbers. Marion county is projected to have the greatest numeric decline (25,400) with Benton having the largest percentage decline (16.8%).

Figure 2 depicts the percentage changes. The areas of greatest population growth are concentrated in the northeastern and southeastern parts of the state, with other major growth areas in the suburban areas of northwestern, southwestern, and central Indiana. The declines are anticipated primarily in a band along the western edge of the state and in east central parts of the state.

> **"At the county level, the changes in Indiana's population appear even more dramatic because of the wide differences among the 92 counties of the state . . . . In all, 77 of the state's 92 counties are projected to increase in population, with the remaining 15 declining in numbers."**

How each county will grow or decline is a function of its fertility, mortality, and migration patterns. Except for Brown and Vermillion, all Indiana counties will experience natural increase (more births than deaths). (See Table 6.) Growth in those two counties will occur, however, as net inmigration exceeds the natural decrease in population. In all, 48 Indiana counties are expected to have net inmigration as the population within the state is redistributed. Although the state as a whole will have net outmigration, this redistribution within the state will change markets and political power. In 15 counties, including Henry, St. Joseph, and Vigo, net outmigration will be sufficient to overcome the natural increase of population and lead to a decline in the number of persons. In 29 counties, including Cass, Lake, Monroe, and Wabash, natural increase is sufficiently large to offset the net outmigration projected for the population. In Bartholomew, Floyd, Hancock, Kosciusko, and 32 other counties, natural increase is greater than net inmigration and is the stronger force in each county's growth. Alternatively, in Crawford, Hamilton, Steuben, Warrick, and 6 other counties, inmigration exceeds natural increase and is the leading factor in county population growth.

In Table 7 the percentage distribution by age in each county is reported along with the median age for the years 1980 and 2020. College counties (Monroe and Tippecanoe) tend to have low median ages. Brown county, with a natural decrease in population, has the highest median age in 2020; at that time nearly 23 percent of the population in Brown county will be age 65 and older.

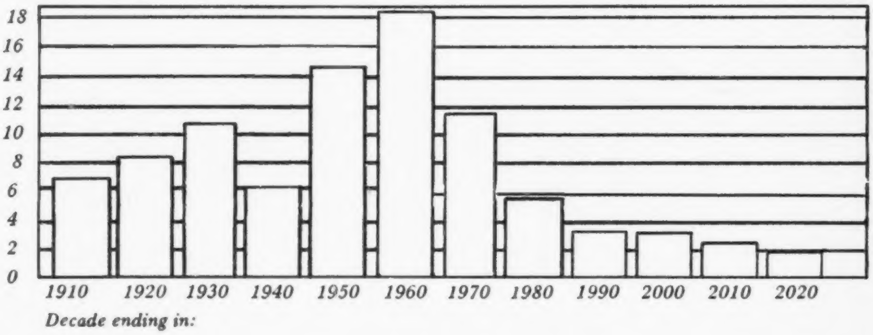
Table 5

Indiana Population

	Population				*Total Change*			
	1980		*2020*					
County	*Number*	*Rank*	*Number*	*Rank*	*Number*	*Rank*	*Percent*	*Rank*
Adams	29,600	48	42,200	39	12,600	16	42.6	9
Allen	294,400	3	342,400	3	48,000	3	16.3	40
Bartholomew	65,100	21	71,100	21	6,000	31	9.2	57
Benton	10,300	87	8,500	90	−1,800	92	−17.5	92
Blackford	15,500	81	13,800	85	−1,700	81	−11.0	91
Boone	36,400	36	47,600	29	11,200	17	30.8	18
Brown	12,400	85	15,700	82	3,300	49	26.6	23
Carroll	19,700	69	22,700	71	3,000	53	15.2	43
Cass	40,900	30	43,200	36	2,300	57	5.6	65
Clark	88,900	14	105,600	14	16,700	11	18.8	36
Clay	24,900	58	27,000	62	2,100	58	8.4	60
Clinton	31,500	44	32,700	51	1,200	67	3.8	69
Crawford	9,800	88	13,300	86	3,500	47	35.7	12
Daviess	27,800	51	30,300	57	2,500	54	9.0	58
Dearborn	34,300	40	45,300	32	11,000	18	32.1	16
Decatur	23,800	61	26,300	64	2,500	54	10.5	55
Dekalb	33,600	42	40,000	42	6,400	28	19.0	33
Delaware	128,600	8	129,500	11	900	69	.7	76
Dubois	34,200	41	42,100	40	7,900	24	23.1	27
Elkhart	137,300	7	168,100	6	30,800	4	22.4	29
Fayette	28,200	50	31,700	53	3,500	47	12.4	51
Floyd	61,200	22	70,200	23	9,000	23	14.7	44
Fountain	19,000	75	19,600	77	600	72	3.2	71
Franklin	19,600	70	25,700	66	6,100	30	31.1	17
Fulton	19,300	72	23,000	70	3,700	45	19.2	34
Gibson	33,200	43	37,400	46	4,200	41	12.7	48
Grant	80,900	17	72,300	20	−8,600	90	−10.6	90
Greene	30,400	45	34,300	50	3,900	44	12.8	49
Hamilton	82,000	16	132,800	10	50,800	2	62.0	3
Hancock	43,900	26	56,900	26	13,000	14	29.6	19
Harrison	27,300	52	43,800	35	16,500	12	60.4	4
Hendricks	69,800	20	92,400	17	22,600	9	32.4	15
Henry	53,400	24	50,400	27	−3,000	85	−5.6	86
Howard	86,900	15	92,000	18	5,100	34	5.9	63
Huntington	35,600	37	39,300	44	3,700	45	10.4	54
Jackson	36,500	35	42,700	37	6.200	29	17.0	38

Figure 2

Percent Change in Population of Indiana



(Table 5, Indiana Population, continued)

	1980		*2020*		*Total Change*			
County	*Number*	*Rank*	*Number*	*Rank*	*Number*	*Rank*	*Percent*	*Rank*
Jasper	26,100	55	41,000	41	14,900	13	57.1	6
Jay	23,300	63	23,800	68	500	76	2.1	73
Jefferson	30,400	45	35,300	49	4,900	35	16.1	41
Jennings	22,900	64	27,500	60	4,600	39	20.1	32
Johnson	77,200	18	103,200	15	26,000	7	33.7	13
Knox	41,900	28	39,700	43	–2,200	84	–5.3	85
Kosciusko	59,600	23	89,300	19	29,700	5	49.8	7
Lagrange	25,500	56	44,300	34	18,800	10	73.7	1
Lake	523,000	2	523,800	2	800	71	.2	77
LaPorte	108,700	12	113,500	13	4,800	37	4.4	68
Lawrence	42,500	27	45,700	30	3,200	52	7.5	61
Madison	139,400	6	136,300	8	–3,100	86	–2.2	80
Marion	765,200	1	739,800	1	–25,400	92	–3.3	83
Marshall	39,200	33	48,300	28	9,100	22	23.2	26
Martin	11,000	86	10,700	87	–300	79	–2.7	82
Miami	39,900	31	45,100	33	5,200	33	13.0	47
Monroe	98,800	13	124,000	12	25,200	8	25.5	24
Montgomery	35,500	38	35,900	48	400	77	1.1	75
Morgan	52,000	25	63,000	25	11,000	19	21.2	31
Newton	14,800	82	21,900	73	7,100	26	48.0	8
Noble	35,400	39	45,600	31	10,200	20	28.8	21
Ohio	5,100	92	6,800	92	1.700	61	33.3	14
Orange	18,700	76	20,800	75	2,100	58	11.2	52
Owen	15,900	80	21,600	74	5,700	32	35.8	11
Parke	16,300	79	17,800	79	1,500	64	9.2	59
Perry	19,300	72	19,900	76	600	72	3.1	72
Pike	13,500	83	15,400	83	1,900	60	14.1	45
Porter	119,800	10	190,900	5	71,100	1	59.3	5
Posey	26,400	53	36,200	47	9,800	21	37.1	10
Pulaski	13,200	84	14,900	84	1,700	61	12.9	50
Putnam	29,200	49	29,800	59	600	72	2.1	74
Randolph	30,000	47	31,400	54	1,400	65	4.7	67
Ripley	24,400	60	31,200	55	6,800	27	27.9	22
Rush	19,600	70	17,800	79	–1,800	82	–9.2	89
St. Joseph	241,600	4	236,700	4	–4,900	87	–2.0	79
Scott	20,500	68	23,800	68	3,300	49	16.1	39
Shelby	39,900	31	42,400	38	2,500	54	6.3	62
Spencer	19,300	72	23,900	67	4,600	39	23.8	25
Starke	22,000	65	26,100	65	4,100	43	18.6	37
Steuben	24,700	59	31,900	52	7,200	25	29.1	20
Sullivan	21,100	67	22,300	72	1,200	67	5.7	64
Switzerland	7,100	90	8,700	89	1,600	63	22.5	30
Tippecanoe	121,700	9	134,700	9	13,000	14	10.7	53
Tipton	16,800	78	16,400	81	–400	80	–2.4	81
Union	6,900	91	7,500	91	600	72	8.7	56
Vanderburgh	167,500	5	159,400	7	–8,100	89	–4.8	84
Vermillion	18,200	77	19,100	78	900	69	4.9	66
Vigo	112,400	11	102,000	16	–10,300	91	–9.2	88
Wabash	36,600	34	37,900	45	1,300	66	3.6	70
Warren	8,900	89	8,800	88	–100	78	–1.1	78
Warrick	41,500	29	70,400	22	28,800	6	69.6	2
Washington	22,000	65	26,900	63	4,900	35	22.3	28
Wayne	76,100	19	70,000	24	–6,100	88	–8.0	87
Wells	25,400	57	30,200	57	4,800	37	18.9	35
White	23,800	61	27,100	61	3,300	49	13.9	46
Whitley	26,200	54	30,400	56	4,200	41	16.0	42
Indiana	**5,490,200**		**6,101,000**		**610,800**		**11.1**	

Additional tables and figures can be generated all too easily from the mass of data in the report on which this summary is based. All of the data in that report are available for use in the Indiana public libraries throughout the state. No amount of analysis and reporting on the data, however, will assure the "accuracy" of the projections. It is the response of the citizens of the state to these projections that determines the future. To the extent that outmigration is reduced or inmigration increased, these data will be "proved" false. Individuals with different views of population growth and charge will make their own judgments on the desirability of the projected outcomes. If they do not like the projections, they can take actions to make the state's future different from that indicated here. ☐

"How each county will grow or decline is a function of its fertility, mortality, and migration patterns. Except for Brown and Vermillion, all Indiana counties will experience natural increase (more births than deaths) . . . . In all, 48 Indiana counties are expected to have net inmigration as the population within the state is redistributed. Although the state as a whole will have net outmigration, this redistribution within the state will change markets and political power."

Table 6

Projected Components of Population Change: 1980-2020

County	*Births*	*Deaths*	*Natural Increase*	*Net Migration*	*Total Change*
Adams	25,930	11,610	14,310	–1,710	12,600
Allen	184,860	111,960	72,810	–24,810	48,000
Bartholomew	32,870	27,710	5,270	730	6,000
Benton	4,960	4,430	370	–2,170	–1,800
Blackford	7,720	7,270	370	–2,070	–1,700
Boone	23,670	15,890	7,740	3,460	11,200
Brown	5,720	6,180	–430	3,730	3,300
Carroll	11,030	8,560	2,580	420	3,000
Cass	23,140	17,940	5,190	–2,890	2,300
Clark	49,850	38,890	10,830	5,870	16,700
Clay	14,610	12,390	2,170	–70	2,100
Clinton	17,730	14,640	3,070	–1,870	1,200
Crawford	6,550	4,890	1,700	1,800	3,500
Daviess	16,900	13,530	3,400	–900	2,500
Dearborn	23,140	15,270	8,000	3,000	11,000
Decatur	14,520	10,020	4,400	–1,900	2,500
Dekalb	21,370	13,910	7,350	–950	6,400
Delaware	66,890	47,140	19,640	–18,740	900
Dubois	21,890	13,950	7,890	10	7,900
Elkhart	89,000	52,950	36,000	–5,200	30,800
Fayette	16,670	12,060	4,620	–1,120	3,500
Floyd	34,230	26,740	7,740	1,260	9,000
Fountain	9,880	8,960	1,020	–420	600
Franklin	13,220	7,750	5,520	580	6,100
Fulton	11,960	9,590	2,370	1,330	3,700
Gibson	18,740	16,270	2,380	1,820	4,200
Grant	38,100	32,470	5,510	–14,110	–8,600
Greene	16,930	15,970	1,060	2,840	3,900
Hamilton	57,360	35,580	21,780	29,020	50,800
Hancock	25,920	18,880	7,080	5,920	13,000
Harrison	21,710	12,560	9,110	7,390	16,500
Hendricks	40,700	28,390	12,310	10,290	22,600
Henry	24,970	22,680	2,170	–5,170	–3,000
Howard	49,330	35,170	14,070	–8,970	5,100
Huntington	21,740	15,100	6,600	–2,900	3,700
Jackson	22,540	16,330	6,200	0	6,200
Jasper	21,410	11,400	10,050	4,850	14,900
Jay	13,510	10,290	3,200	–2,700	500
Jefferson	16,670	13,690	3,180	1,720	4,900
Jennings	12,950	9,970	3,010	1,590	4,600
Johnson	48,250	33,160	15,140	10,860	26,000
Knox	20,610	20,070	520	–2,720	–2,200
Kosciusko	47,890	26,530	21,350	8,350	29,700
Lagrange	27,840	10,120	17,820	980	18,800
Lake	319,030	198,810	120,080	–119,280	800
LaPorte	59,030	46,010	12,950	–8,150	4,800
Lawrence	22,000	20,590	1,380	1,820	3,200
Madison	70,470	57,770	12,780	–15,880	–3,100

(Table 6, Projected Components of Population Change, continued)

County	*Births*	*Deaths*	*Natural Increase*	*Net Migration*	*Total Change*
Marion	411,390	304,440	106,900	−132,300	−25,400
Marshall	26,140	17,770	8,320	780	9,100
Martin	6,080	4,710	1,310	−1,610	−300
Miami	25,530	14,990	10,390	−5,190	5,200
Monroe	60,810	28,740	31,930	−6,730	25,200
Montgomery	16,800	15,560	1,180	−780	400
Morgan	31,280	21,960	9,320	1,680	11,000
Newton	10,970	6,810	4,230	2,870	7,100
Noble	24,290	14,910	9,480	720	10,200
Ohio	3,210	2,230	950	750	1,700
Orange	10,580	9,310	1,260	840	2,100
Owen	9,550	7,650	1,790	3,910	5,700
Parke	8,240	8,080	250	1,250	1,500
Perry	11,470	8,950	2,470	1,870	600
Pike	7,640	6,820	770	1,130	1,900
Porter	85,830	49,590	36,270	34,830	71,100
Posey	17,360	11,560	5,870	3,930	9,800
Pulaski	8,710	6,230	2,420	−720	1,700
Putnam	13,950	12,230	1,640	−1,040	600
Randolph	15,940	12,880	3,070	−1,670	1,400
Ripley	16,790	11,080	5,620	1,180	6,800
Rush	10,100	8,470	1,570	−3,370	−1,800
St. Joseph	127,140	100,600	26,550	31,450	−4,900
Scott	11,500	9,370	2,050	1,250	3,300
Shelby	21,470	16,610	4,710	−2,210	2,500
Spencer	11,640	8,630	3,110	1,490	4,600
Starke	14,170	11,030	3,150	950	4,100
Steuben	14,940	11,900	3,050	4,150	7,200
Sullivan	11,290	11,020	330	870	1,200
Switzerland	4,380	3,300	1,110	490	1,600
Tippecanoe	63,010	35,800	27,120	−14,120	13,000
Tipton	8,430	7,100	1,240	−1,640	−400
Union	3,960	2,820	1,040	−440	600
Vanderburgh	82,770	77,050	5,640	−13,740	−8,100
Vermillion	8,820	8,990	−150	1,050	900
Vigo	48,580	47,970	560	−10,860	−10,300
Wabash	19,540	15,370	4,100	−2,800	1,300
Warren	4,270	3,790	520	−620	−100
Warrick	30,700	18,460	12,220	16,680	28,900
Washington	13,590	9,670	3,920	980	4,900
Wayne	38,070	32,080	5,910	−12,010	−6,100
Wells	15,670	9,860	5,730	−930	4,800
White	14,070	12,100	2,120	1,180	3,300
Whitley	15,350	11,210	4,160	40	4,200
Indiana	**3,182,000**	**2,271,870**	**910,310**	**−301,360**	**608,700**

Detail may not add to 100 because of rounding.

"In Table 7 the percentage distribution by age in each county is reported along with the median age for the years 1980 and 2020."

Table 7

Age Distribution in Indiana Counties As a Percent of Population in County:

County	*0-19*		*20-39*		*40-64*		*64 and Older*		*Median age*	
	1980	*2020*	*1980*	*2020*	*1980*	*2020*	*1980*	*2020*	*1980*	*2020*
Adams	37.5	32.3	29.2	27.8	22.3	26.7	11.2	13.0	29.7	32.5
Allen	34.2	25.3	32.8	26.9	23.5	31.8	9.5	16.0	28.6	38.4
Bartholomew	34.4	20.9	32.1	24.5	24.6	34.8	8.9	19.9	29.5	43.8
Benton	33.3	27.4	25.8	26.8	25.9	26.7	14.6	19.3	31.8	37.0
Blackford	33.5	24.9	28.3	28.1	26.0	30.5	12.6	17.1	31.3	38.1
Boone	33.4	24.9	30.4	25.9	25.0	31.3	11.4	18.1	31.0	39.5
Brown	32.1	16.9	31.4	22.1	25.9	38.5	10.7	22.6	31.2	47.9
Carroll	32.7	24.2	28.5	24.6	26.0	31.6	12.8	19.6	31.2	41.0
Cass	32.5	25.8	28.9	26.5	26.5	31.5	12.2	16.5	31.2	38.4
Clark	34.2	21.8	32.8	25.5	24.0	35.7	8.9	17.0	28.9	42.0
Clay	31.2	26.3	27.5	26.9	25.8	30.8	15.5	16.3	32.6	37.8
Clinton	32.3	26.1	28.3	26.5	25.3	31.0	14.2	16.6	31.4	38.2
Crawford	34.4	24.4	28.6	26.2	24.0	33.8	13.5	15.8	30.0	39.6
Daviess	33.3	27.7	27.5	27.2	25.2	28.7	14.2	16.1	31.1	36.4
Dearborn	35.4	26.1	29.0	26.3	24.9	31.2	10.8	16.2	29.5	38.0
Decatur	35.5	26.5	28.8	26.7	23.7	31.1	12.2	15.9	29.1	37.6
Dekalb	35.3	26.5	30.3	26.2	23.3	31.6	11.1	15.7	29.0	37.9
Delaware	33.2	27.8	33.3	34.7	23.5	25.2	10.0	12.4	27.8	30.2
Dubois	35.4	24.9	30.5	26.4	23.0	31.7	11.4	17.2	28.1	39.0
Elkhart	34.2	25.5	32.2	26.4	24.0	31.2	9.6	16.8	29.0	38.6
Fayette	34.8	25.1	29.2	26.1	25.4	31.7	11.1	17.0	29.6	39.0
Floyd	33.0	23.2	31.1	25.8	24.9	32.8	11.0	18.0	30.3	40.7
Fountain	32.4	23.4	27.8	25.4	26.6	31.8	13.4	18.9	32.1	40.7
Franklin	37.7	26.3	28.6	26.2	22.9	31.1	10.8	16.2	28.0	37.9
Fulton	31.9	26.1	27.2	26.2	26.8	30.7	14.4	17.1	32.4	38.3
Gibson	31.2	24.2	28.5	26.2	25.9	32.9	14.3	16.9	31.8	39.8
Grant	33.8	22.9	29.3	26.9	26.4	32.8	10.6	17.5	29.8	40.2
Greene	30.8	24.3	27.3	25.5	26.0	32.1	16.1	18.2	33.6	40.2
Hamilton	35.5	22.6	31.9	24.1	25.3	33.4	7.4	20.0	30.1	42.7
Hancock	36.2	21.9	30.8	25.0	24.9	34.5	8.3	18.7	29.8	42.4
Harrison	35.3	25.8	31.0	26.2	23.6	32.6	10.1	15.5	29.0	38.5
Hendricks	35.7	21.6	32.3	24.1	24.3	34.2	7.7	20.0	29.4	43.3
Henry	33.5	22.4	29.0	25.7	25.4	33.0	12.0	18.8	30.9	41.4
Howard	34.6	24.6	31.0	26.4	25.5	31.9	8.9	17.1	29.4	39.2
Huntington	33.5	26.8	29.0	26.8	24.3	30.5	13.3	15.6	29.9	37.3
Jackson	33.4	25.5	29.7	26.3	24.5	31.4	12.5	16.8	30.2	38.6
Jasper	37.2	26.7	30.7	27.3	22.4	31.2	9.8	15.1	27.0	37.0
Jay	33.7	26.7	27.4	27.3	25.5	29.8	13.2	15.9	31.1	37.0
Jefferson	33.7	22.0	31.2	26.1	24.0	25.6	11.3	16.2	29.4	41.3
Jennings	35.6	22.2	31.8	25.2	22.6	35.1	9.8	17.6	28.5	42.0
Johnson	35.7	22.4	32.4	25.7	23.3	33.7	8.7	18.2	28.7	41.5
Knox	31.4	23.9	28.2	27.4	25.1	32.1	15.2	16.6	31.5	39.0
Kosciusko	33.7	27.4	32.0	26.6	23.7	31.0	10.5	15.0	29.1	37.0
Lagrange	40.7	34.4	28.5	27.8	21.6	25.7	9.5	10.0	26.0	30.4
Lake	35.2	28.6	30.3	28.2	25.7	28.7	8.8	14.4	28.3	35.4
LaPorte	33.0	24.3	31.0	26.1	25.3	32.9	10.7	16.6	29.9	39.6
Lawrence	32.3	22.5	28.8	25.3	26.0	33.9	12.8	18.4	31.6	41.7
Madison	33.3	23.3	30.3	26.4	25.4	32.9	10.9	17.3	30.2	40.2
Marion	31.9	24.2	33.1	27.4	24.7	32.4	10.4	16.0	29.2	39.0
Marshall	33.7	27.0	28.9	26.7	24.8	30.2	12.4	16.1	30.1	37.2
Martin	35.0	26.2	29.2	26.3	25.1	30.0	10.9	17.6	29.5	38.3
Miami	35.1	26.4	32.3	26.4	22.5	32.4	9.9	14.8	27.9	37.9
Monroe	30.5	29.1	44.2	42.6	18.1	19.0	7.2	9.3	24.7	25.2
Montgomery	32.1	21.6	29.4	24.9	25.6	34.0	13.1	19.5	31.1	42.8
Morgan	36.3	23.9	30.5	25.4	24.6	32.0	8.7	18.6	29.0	40.5
Newton	36.1	26.3	29.5	26.2	23.2	31.6	11.9	15.9	29.1	38.1

(Table 7, Age Distribution, continued)

County	*0-19*		*20-39*		*40-64*		*64 and Older*		*Median Age*	
	1980	*2020*	*1980*	*2020*	*1980*	*2020*	*1980*	*2020*	*1980*	*2020*
Noble	34.9	26.6	30.5	26.3	24.0	31.2	10.8	15.7	29.0	37.7
Ohio	33.1	24.0	28.4	25.4	25.7	32.5	13.5	18.8	31.3	40.9
Orange	32.2	25.2	28.3	26.0	25.3	31.9	14.0	16.7	31.5	39.0
Owen	33.3	21.7	27.4	24.4	25.4	34.0	13.6	20.1	31.8	43.3
Parke	32.1	22.5	27.2	24.3	26.1	33.7	15.1	19.7	32.8	42.8
Perry	33.5	28.0	28.4	27.4	25.2	28.1	13.3	16.5	30.3	36.1
Pike	30.8	24.0	27.7	26.2	25.9	32.4	15.5	17.5	33.2	39.9
Porter	36.0	22.4	34.6	25.4	22.6	35.6	6.9	16.6	27.2	41.7
Posey	34.2	23.9	31.7	26.1	23.5	33.2	10.7	16.6	29.2	39.9
Pulaski	34.4	29.8	26.9	27.0	25.0	27.7	14.4	15.8	30.4	35.3
Putnam	32.7	20.9	30.2	26.7	24.8	34.4	12.3	17.9	29.5	42.0
Randolph	33.6	23.8	28.5	25.8	25.7	32.3	12.2	17.8	30.9	40.2
Ripley	35.3	27.7	28.0	26.2	23.8	30.6	13.1	15.8	29.6	37.0
Rush	35.1	26.8	26.9	27.2	24.9	29.1	13.1	16.9	30.0	37.1
St. Joseph	31.7	24.1	31.2	27.5	25.1	32.0	12.1	16.4	29.9	38.9
Scott	36.3	22.6	29.4	24.8	23.3	34.8	10.7	17.7	28.5	41.9
Shelby	34.3	23.8	29.6	25.5	25.0	32.1	11.0	18.6	29.9	40.5
Spencer	33.6	24.8	29.6	24.9	23.8	32.0	13.3	18.1	29.9	40.2
Starke	35.5	26.7	27.8	26.8	23.8	30.5	13.0	16.0	29.7	37.3
Steuben	32.7	22.9	30.3	25.1	24.9	33.9	12.2	18.0	30.1	41.5
Sullivan	30.6	24.5	27.3	26.1	25.9	32.2	16.5	17.0	33.7	39.4
Switzerland	33.5	25.6	26.3	25.9	26.5	30.9	14.9	18.0	32.7	39.0
Tippecanoe	32.0	27.0	40.8	39.7	19.1	22.1	8.2	11.2	24.7	27.3
Tipton	33.0	23.6	29.2	25.8	25.9	31.7	12.1	19.2	31.3	40.6
Union	34.6	25.9	28.3	26.5	24.3	30.3	12.2	17.7	30.1	38.4
Vanderburgh	29.4	23.0	30.8	26.5	26.1	32.8	13.7	17.7	31.5	40.4
Vermillion	31.0	21.4	28.2	25.1	25.3	34.4	15.8	18.9	33.0	42.6
Vigo	30.7	25.1	32.4	31.7	23.9	29.1	13.1	14.0	29.4	34.8
Wabash	34.1	23.4	29.7	27.0	24.3	32.7	12.0	16.9	29.4	39.7
Warren	34.2	23.0	28.0	24.7	26.5	31.6	12.4	20.7	31.3	41.7
Warrick	35.7	22.9	32.5	24.7	23.2	34.8	8.6	17.6	29.1	41.8
Washington	34.8	24.8	28.6	26.4	24.0	32.2	12.3	16.5	29.8	39.1
Wayne	32.8	24.4	28.4	27.2	26.1	30.9	12.6	17.4	31.2	38.8
Wells	34.2	25.2	30.4	26.3	24.1	30.7	11.3	17.9	29.6	38.9
White	32.5	25.6	28.4	25.8	25.8	31.7	13.6	17.0	31.5	38.9
Whitley	34.1	24.6	29.9	25.6	24.6	31.7	11.5	18.0	29.8	39.8
Indiana	**33.4**	**24.9**	**31.4**	**23.3**	**24.5**	**31.4**	**10.7**	**16.3**	**29.2**	**38.3**

Detail may not add to 100 because of rounding.

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Indiana Business Review

Volume 58 September-October 1983

Joel C. Webster **Indiana Profile: Where the State Stands**

Patrick Klingaman **Standard Time Zones: A Quiet Celebration of 100 Years**

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Indiana Profile: Where the State Stands

In this issue

Averages are amusing and ranks can be rollicking. Joel Webster offers a summary of Indiana's relative position in numerous categories, thanks to a compilation of the Census Bureau. These data are to be read with caution and used with care in drawing conclusions.

If time is money, then standard time is as important as a common national currency. Pat Klingaman reminds us of a national event which most will let slide when it occurs on November 18.

Two articles put the economic recovery into perspective. First, changes in personal income for Indiana and its neighbors are discussed. Then Brian Burden examines some aspects of the recovery to date.

Morton J. Marcus
Editor

Indiana Business Review

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Joel C. Webster

Research Associate, Division of Research, Indiana University Graduate School of Business

The Bureau of the Census has assembled a table of information (accompanying this article) which includes Indiana's rank among the fifty states on a number of measures. Although not all indices refer to the same date, the whole provides a profile of Indiana's position in the recent past.

Population

Indiana ranks twelfth among the fifty states in population. As it ranks only thirty-eighth in size (with 35,932 square miles), its population density of 152.8 individuals per square mile is 238% of the national average. Despite this density, it has a lower percentage of metropolitan residents than the nation as a whole. This population is slightly younger than the national average, with a lower percentage of nonwhites (8.9% versus 16.9% for the nation). Relatively few individuals moved into the state from elsewhere during the 1975-1980 period. In fact, this inmigration rate ranked forty-second among the fifty states.

Indiana has an average death rate, but the birth rate is slightly above the national average (though still only twenty-eighth in the nation). It also has an average marriage rate, but a divorce rate much higher than the national average, ranking ninth among the fifty states. Its legal abortion rate is substantially below the national average, only 227 per 1,000 live births compared to the national rate of 428 per 1,000 live births.

Lifestyle

Hoosiers are more likely than average to own their own homes. Only four states have a higher home ownership rate than Indiana. They are correspondingly less likely to reside in multi-unit structures. Only 10.8% of the total housing units are in structures containing five or more of those units, compared to 17.5% in the

Significant Rankings

Item	*Rank*
Total population, 1980	12
Land area, square miles, 1980	38
Population per square mile, 1980	13
Percent change in population, 1970-1980	35
Median age, in years, 1980	30
Population 65 years old and over, 1980	30
Non-White population, 1980	30
Black population, 1980	22
Asian and Pacific Islander, 1980	30
American Indian, Eskimo, and Aleut, 1980	39
Spanish population, 1980	26
Metropolitan population, 1980	20
Persons living in different state in 1975 (5 years old and over), 1980	42
Birth rate[1], 1979	28
Death rate[1], 1979	22
Marriage rate[1], 1980	25
Divorce rate[1], 1979	9
Legal abortions per 1,000 live births, 1980	37
Physicians per 100,000 population, 1980	42
Hospital beds per 100,000 population, 1980	26
Personal health care expenditures per capita, 1978	30
Total housing units, 1980	12
Year-round housing units, 1980, percent–	
Built between 1970 and 1980	41
Prior to 1940	19
With 5 or more units in structure	35
With air conditioning	25
Homeownership rate, 1980	5
Median value of specified owner-occupied housing units, 1980	39
Median gross rent of specified renter-occupied housing units, 1980	30
Crime rate[2], 1981	37
Federal and state prisoners per 100,000 population, 1981	21
Public elementary and secondary schools, 1981–	
Expenditures per capita	43
Current expenditures per pupil	41
Public school teachers' salaries, 1982	19
Percent high school graduates (persons 25 years old and over), 1980	32
Undergraduate enrollment in institutions of higher education, 1979	13
Civilian labor force, 1981	12
Unemployment rate, 1981	4
Manufacturing employment, 1979	
Number	10
Percent of employed	6
Average weekly earnings of production workers in manufacturing, 1981	6

Among the Fifty States

Indiana	United States
5,490,224	226,545,805
35,932	3,539,295
152.8	64.0
5.7%	11.4%
29.2	30.0
10.7% of population	11.3% of population
8.9% of population	16.9% of population
7.6% of population	11.7% of population
.4% of population	1.5% of population
.1% of population	.6% of population
1.6% of population	6.4% of population
69.8% of population	74.7% of population
7.6% of population	9.7% of population
16.2	15.9
8.5	8.5
10.7	10.9
7.7	5.4
227	428
128	185
585	602
$671	$745
2,091,795	88,411,263
22.0%	26.2%
32.1%	25.8%
10.8%	17.5%
58.6%	55.0%
71.7%	64.4%
$37,200	$47,200
$219	$243
4,540	5,800
138	153
$354	$434
$1,793	$2,350
$19,000	$19,000
66.4%	66.5%
180,170	8,820,657
2,617,000	108,670,000
10.1%	7.6%
731,800	21,914,754
30.9%	22.4%
$376	$318

Significant Rankings Among the Fifty States, continued

Item	*Rank*	*Indiana*	*United States*
Median household money income, 1979	18	$17,582	$16,841
Per capita money income, 1979	24	$7,142	$7,298
Percent below poverty level, 1979			
Persons	42	9.7%	12.4%
Children under 18 years	39	11.9%	16.0%
State and local governments, 1981–			
Expenditures, total	19	$8.9 billion	$487.0 billion
Expenditures per capita	49	$1,628	$2,150
Tax revenues per capita	40	$827	$1,079
Debt per capita	50	$798	$1,606
Federal Government expenditures per capita, 1981	49	$1,791	$2,414
Percent of voting-age population casting votes for President 1980	20	57.9%	53.2%
Motor vehicles per 1,000 population, 1980	25	730	713
Means of transportation to work, 1980			
Percent of workers commuting in carpools	29	20.0%	19.7%
Percent using car, truck, or van	10	89.9%	84.1%
Motor vehicle traffic fatalities per 100,000 licensed drivers, 1980	36	32	35
Energy consumption per capita, 1980	6	445 million BTU	334 million BTU
Temperature, average annual	24	52.5° F.	53.2° F.
Precipitation, average annual	23	39.5 inches	28.8 inches
Farms, 1978			
Number	11	88,427	2,478,642
Land in farms	19	17.0 million acres	1,029.7 million acres
Acreage per farm, 1982	35	191 acres	433 acres
Average value of farm land and buildings per acre, 1982	8	$1,715	$788
Gross farm income, 1981	9	$5.3 billion	$161.2 billion
Mineral production, value, 1980	25	$1.1 billion	$143.9 billion
Construction contracts, value, 1981	24	$2.4 billion	$150.2 billion
Manufacturing shipments, value, 1980	9	$63.4 billion	$1,850.9 billion
Manufacturing employment 1980, percent–			
Export related[3]	7	4.7%	3.6%
Defense related[4]	23	2.1%	3.6%
Retail sales per capita, 1977	21	$3,379	$3,291

[1] Per 1,000 resident population.
[2] Per 100,000 resident population.
[3] Percent of total private sector employment.
[4] Percent of all manufacturing employment.

Source: U.S. Bureau of the Census.

nation. Indiana residents are also more likely to travel to work in a car, truck, or van than residents in other states, though they are average in terms of the percentage of individuals commuting in carpools. Hoosiers consume nearly one-third more energy per person than does the average American. Indiana residents are more likely to vote for president than are citizens in the nation as a whole.

Health, Education and Government

Indiana has a shortage of physicians, ranking forty-third in the nation in this category. If Indiana were at the national average in this category, it would have ten physicians per 100,000 residents, whereas it currently has only seven. It is average in terms of available hospital beds, but spends less on health care per capita than the nation.

In educational expenditures per pupil, Indiana spends $1,793 per year compared to the national average of $2,350. That is, the nation as a whole spends nearly $4 for every $3 spent in Indiana. Salaries of public school teachers, however, are precisely equal to the national average of $19,000.

State and local government expenditures per Hoosier rank forty-ninth of the fifty states, more than 24% below the national average. Federal government expenditures per capita within this state also rank forty-ninth in the nation, with the federal government spending $623 less per year on each Hoosier than it does for the average American.

Economy

Indiana ranks ninth among the fifty states in gross farm income (5.3 billion dollars). This occurs despite the small average size of Indiana farms (191 acres versus the U.S. average of 433 acres).

It also ranks ninth in the value of its manufacturing shipments (63.4 billion dollars). Only five states have a higher percentage of their workers employed in the manufacturing sector and Hoosier workers earn more per week than manufacturing workers in all but five states. However, the 1981 unemployment rate in Indiana was fourth in the nation at 10.1%. Only 2.1% of manufacturing employment in Indiana is defense-related, compared to the national average of 3.6%.

See the Table for additional comparisons. ☐

Standard Time Zones: A Quiet Celebration of 100 Years

by Patrick Klingaman

Research Assistant, Division of Research, School of Business, Indiana University

A busy modern business executive hopping on a train or plane in Washington, D.C. to make a last-minute appointment in New York need only glance at a wristwatch to see if he or she has arrived in time. Intercity travelers relying on their watches prior to 1883 would likely have missed a lot of appointments.

Before November 18, 1883, each of the larger cities in the United States had its own "solar" time (based on when the sun was directly overhead), which was used by many of the surrounding smaller towns and most railroad routes originating in that city. Instead of the four time zones present for the past 100 years, railroad schedulers had only managed to reduce the hundreds of local times (Indiana alone had 23) to a patchwork of 53 "standard" times. Even our Washington to New York traveler would have had to reset his watch at least three times along the way to coincide with the times at the various city train stations.

The menagerie of time standards, combined with faster trains running on tight schedules, created confusion and bewilderment among passengers, commercial shippers, and even railroad employees. Stations in major cities displayed up to six clocks for passengers—each reading a different time and corresponding to a separate railroad line—so it was more often a matter of luck than skill that a passenger switching trains ever arrived in time to make proper connections. Time problems, together with lack of uniformity in train cars, rails, and signaling practices, made commercial and passenger rail operations slow, inefficient, and sometimes dangerous.

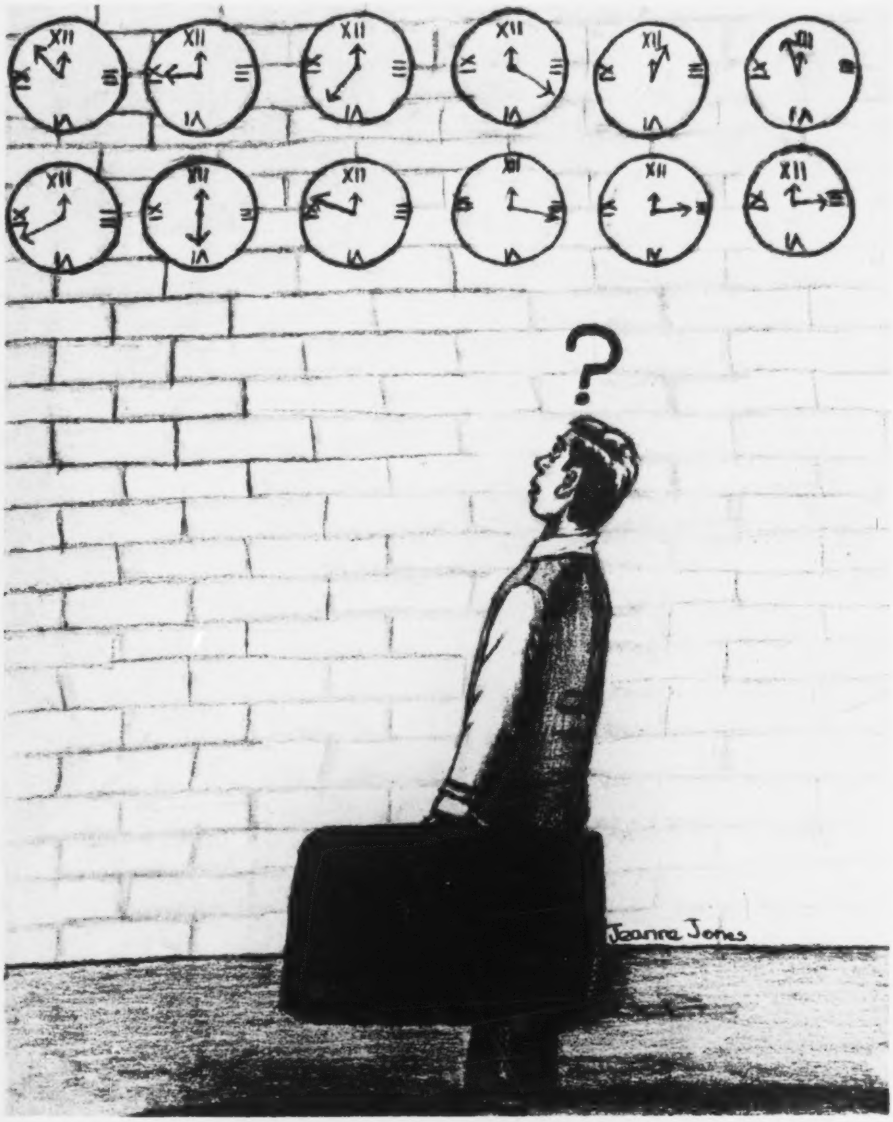
For a nation in the midst of a transition from an agrarian base to a major industrial power, such a transportation nightmare was simply not tolerable. England had pioneered the single standard time concept as far back as 1848, but U.S. railroad officials realized that applying one time to a vast, sprawling nation would be very impractical and would "disrupt local customs." The idea of dividing the country into four time belts or zones was first credited to Professor C.F. Dowd, principal of the Temple Grove Seminary for Young Ladies in New York, who offered his interesting but sketchy proposal as early as 1872. That same year, a large group of railroad leaders gathered in St. Louis and formed an organization called the Time-Table Convention, later known as the General Time Convention.

With a strong organization in place, and deluged with wide-ranging ideas, all the railroads needed was a leader to make sense of it all. William F. Allen, a former railroad engineer and then editor of the *Official Guide of the Railways,* was elected secretary of the first General Time Convention in 1876. He immediately started searching for a way to fuse and mold many heavily theoretical proposals into a practical plan.

Allen emerged in 1883 with a plan calling for the four time zones we have today: Eastern, Central, Mountain, and Pacific. Instead of dividing the zones precisely along the 75, 90, 105, and 120 meridians, as many scientists had proposed, Allen proposed to alter the boundaries substantially to coincide with major railroad switching points. He also proposed that the railroad time zones apply to the rest of the nation as well and included an appeal to cities to abandon their local time standards—a pretty bold move considering his organization had no authority to implement such a policy.

The General Time Convention adopted Allen's plan on October 11, 1883, and selected noon on Sunday, November 18 to change the clocks. Now came the task of convincing the rest of the country to go along with it. With some exceptions, people generally understood the convenience of uniform time and welcomed the change. The *New York Times* strongly endorsed the plan, saying, " . . . its convenience and simplicity will be so generally recognized that the people will wonder why the change was delayed so long." A *Chicago Tribune* editorial stated, "Seldom has a revolution so radical been effected with such an absence of opposition and friction."

Although those opposing standard time were definitely in the minority, they were



a very loud and emotional minority. Most city councils quickly voted to adopt standard time, but cities such as Fort Wayne, Indianapolis, and Chicago still hadn't gone along with the change by November 18. Mayor Dogberry of Bangor, Maine, vetoed a time-change ordinance passed by the city council, shouting, "It is unconstitutional, being an attempt to change the immutable laws of God Almighty and hard on the **workingman by changing night into day."** The mayor vowed to keep the church bells from ringing on the new time—by force if necessary.

Many of those opposed to standard times were not so much against the standards themselves but were angered by the fact it was the railroad's time. Some expressed the desire to live on "God's time—not Vanderbilt's." An editorial in the *Indianapolis Sentinel* best summed up the anti-railroad attitude.

"The sun is no longer boss of the job. People—55,000,000 of them—must eat, sleep and work as well as travel by railroad time. It is a revolt, a rebellion . . . People will have to marry by railroad time, and die by railroad time. Ministers will be required to preach by railroad time—in fact, the Railroad Convention has taken charge of the time business and the people may as well set about adjusting their affairs in accordance with its decree."

The *New York Times* also attacked the time plan, if only in jest, by noting the most serious flaw of the plan is that it went into effect on Sunday, when, in some areas, "people will go to church by the old time and come out of it by the new," thus lengthening the amount of time a clergyman could "inflict" his sermon upon his "helpless flock."

Some clergymen were not amused, however. In Tennessee, for example, the Reverend Mr. Watson emphasized his disgust at the Louisville & Nashville Railroad's abandonment of sun time by smashing his watch with a hammer on the pulpit in front of the entire congregation.

Despite the opposition, the transition to standard time on November 18 went about very smoothly. Telegraph signals guided the many train stations and jewelry shops in setting their clocks to the new time. The event attracted quite a crowd, according to the *New York Times,* since many people couldn't understand how such a great transformation could occur without some serious consequences. "There was a universal expression of disgust when it was discovered that all that was necessary to effect the change was to stop the clock for four minutes and then start it again."

Resetting the clocks might have only taken a few minutes, but it took much longer for the entire nation to switch over to standard time. By the middle of 1884, 22 of the 100 largest U.S. cities still refused to part with their local standards—it took Cincinnati seven years to come around. Louisville even switched back to local time for a short period. It took the federal government 35 years to act on the issue, passing the Standard Time Act in 1918. The government has, over the years, made a few changes in Mr. Allen's original plan, but the substance of the railroad plan remains.

A Sample of Local Time

City	*1883*	*1983*
Washington, D.C.	12:50 p.m.	1:00 p.m.
Pittsburgh	12:31 p.m.	1:00 p.m.
Cleveland	12:24 p.m.	1:00 p.m.
Cincinnati	12:13 p.m.	1:00 p.m.
Louisville	12:09 p.m.	1:00 p.m.
Indianapolis	12:07 p.m.	1:00 p.m. (winter) Noon (summer)
Chicago	Noon	Noon
St. Louis	11:50 a.m.	Noon
Dubuque	11:48 a.m.	Noon
St. Paul	11:41 a.m.	Noon
Omaha	11:27 a.m.	Noon

Source: *The Day of Two Noons* by Carlton J. Corliss, Chicago, 1941.

What was the impact of standard time? Considering that the bulk of the intercity freight and passenger traffic of the period depended upon the railroads, the benefits associated with the resulting increase in rail efficiency and safety are incalculable. The simple need to make the trains run on time made it all possible. Beyond that, a common standard of time helped complete the unification of the country. The Civil War, the railroads, the telegraph, and a common currency were now joined by a common time standard, which helped mold a nation and set the basis for the emergence of a world power. ☐

Shifts in Personal Income

Morton J. Marcus

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Table 1

Percent Change in Personal Income

	1982:4-1983:1	*1983:1-1983:2*	*1982:4-1983:2*
Indiana	**1.40**	**1.96**	**3.38**
Illinois	1.19	2.16	3.37
Kentucky	1.34	1.02	2.38
Michigan	2.56	1.79	4.39
Ohio	0.80	2.14	2.96
United States	**0.96**	**2.21**	**3.19**

Table 2

Percent Share of U.S. Personal Income (second quarter of year shown)

	1977	*1979*	*1981*	*1983*
Indiana	**2.4179**	**2.3920**	**2.2160**	**2.1198**
Illinois	5.9617	5.7695	5.4800	5.3589
Kentucky	1.3585	1.3354	1.2794	1.2626
Michigan	4.5175	4.4625	4.0905	3.8905
Ohio	4.9887	4.8623	4.5874	4.4416
Five-state total	**19.2443**	**18.8217**	**17.6533**	**17.0734**

Indiana's personal income grew in the second quarter of 1983 by $1.1 billion, or 1.96%. (Data are nominal values seasonally adjusted at annual rates.) These recently released results from the Bureau of Economic Analysis in the U.S. Department of Commerce indicate that the economic expansion of the second quarter was more rapid than that of the first quarter, when Indiana's personal income advanced at a 1.40% rate. Since the low of the recent recession in the last quarter of 1982, Indiana's personal income has advanced by 3.38% compared with a national growth rate of 3.19%. (See **Table 1**.)

Michigan's advance of 4.39% in personal income in the past half year has been the strongest of the four states bordering on Indiana. Illinois has also outpaced the nation, but Ohio and Kentucky have grown more slowly than the country as a whole. Nationally, the rate of growth in personal income accelerated sharply in the second quarter, leaving all five states growing at rates behind the U.S. pace. Growth in Kentucky and Michigan ran counter to the national pattern by slowing in the second quarter. Ohio has trailed the national growth rate in both quarters of this year.

Differential rates of growth can be expected as the recovery surges through the economy. Persistent attention to quarterly patterns tends to obscure the longer term patterns as reported in **Table 2**. In the second quarter of 1983, Indiana's share of the nation's personal income stood at 2.1198%, down from 2.4179% in the second quarter of 1977. Less than one-

Table 3

1983:2 Total Personal Income (in billions of dollars, SAAR)*

	As realized	*1977:2 share*	*Difference*	*Realized as a percent of 1977:2 share*
Indiana	**$57.4**	**$65.5**	**$8.1**	**87.7**
Illinois	145.2	161.5	16.3	89.9
Kentucky	34.2	36.8	2.6	92.9
Michigan	105.4	122.4	17.0	86.1
Ohio	120.3	135.2	14.8	89.0

*SAAR = Seasonally adjusted at annual rates third of that decline was experienced in the past two years; nearly 60% of the loss took place between 1979 and 1981. Hence, it would be erroneous to assume that the recent recession (July 1981 to November 1982) was chiefly responsible for Indiana's declining share of national personal income.

For all five states the pattern is similar: more than half of the lost share during the past six years for Indiana and its neighbors occurred between the second quarter of 1979 and the same quarter of 1981. The region, if these five states may be so considered, declined from 19.2% of the nation's personal income to 17.1%, a loss of 2.2% (numbers may not add because of rounding). This lost share was equal to $58.8 billion in the second quarter of 1983. Alternatively stated, if the five states together had the same share of the nation's personal income this spring that they enjoyed in the spring of 1977, their total income would have been nearly $60 billion more than actually reported by the Bureau of Economic Analysis. (See **Table 3**.)

Indiana's share of this $58.8 billion was $8.1 billion, or 13.7%. These sums represent the lost opportunities of the citizens in this state and its neighboring states—lost opportunities for salaries and wages and other forms of personal income which translate into retail dollars and tax revenues. In the Hoosier state, our reduced share of the national total left personal income 12.3% below its equivalent 1977 level. Only Michigan, of the five states, had a poorer record.

If the national expansion now in progress results in this state advancing faster than the nation, as has often happened during past recoveries, then some of that lost share can be regained. But no recovery of the lost income is possible. Those opportunities are gone and attention must be focused on such opportunities as may lie ahead. ☐

Indiana's Business

Recovery in 1983

Brian Burden

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The general consensus among national economists was that the U.S. economy began its current recovery late last fall. The U.S. index of leading economic indicators posted successive monthly gains starting in October 1982 and the national unemployment rate started declining from its November high of 10.8%. But how has Indiana's economy done in comparison?

Construction Activity

The construction industry is usually one of the leading sectors in an economic recovery. As interest rates ease and credit loosens, construction activity responds positively. Increased construction activity creates ripple effects that spill into complementary industries like glass, lumber, steel, and electrical supplies.

Total construction activity is up 12.6% from a year earlier in the first eight months of 1983. The total construction activity index reached a high of 507.8 in February of 1979, but slid to a low of 164.5 in February of 1982 before rising again to its August 1983 level of 238.2.

Housing Starts

Housing starts reached an historic high of 48,902 units in 1973. (We began keeping records in 1953.) The next best year was in 1978 when 42,530 units were started. Although seasonally adjusted housing starts are up by 48.4% in the first eight months of 1983, the total number of housing starts projected for 1983 will be 19,400 units, quite a bit below the peak years in the early 1970s.

Unemployment Rate

The seasonally-adjusted unemployment rate in Indiana reached a high of 14.0% in November 1982. After declining to 8.8% in July, the unemployment rate edged up slightly to 9.3% in August, very near the national average.

As recently as May 1979, the unemployment rate was as low as 5.4%. Only during the 1974-75 recession did Indiana's unemployment exceed 8% and then only from January to October of 1975. By contrast, the Indiana unemployment rate has not been below 8% since December of 1979.

Manufacturing Employment

Manufacturing employment also tends to vary directly with the economy. Typically an economic slowdown will hit the durable goods manufacturers harder and longer because consumers postpone purchases of big-ticket items in the face of uncertain employment conditions. Indiana has a large manufacturing sector and manufacturing employment has fluctuated widely.

Seasonally-adjusted manufacturing employment rose to 767,590 in December of 1973, and fell after the oil embargo and subsequent recession until July 1975. Manufacturing employment reached 753,280 in December 1978, but then decreased dramatically during the last recession.

Although the manufacturing employment index rose 0.4% in the first eight months of 1983, manufacturing employment stood at only 570,800 in August, down 192,480 or 24% from December 1978.

Non-manufacturing Employment

Non-manufacturing employment would include the areas of banking and financial services, agriculture, wholesale, retail, and food services. The seasonally-adjusted non-manufacturing employment index declined 0.1% in the first 8 months of 1983.

Growth in the non-manufacturing sector has been significant in the past 15 years. Seasonally adjusted non-manufacturing employment averaged 1,094,470 during 1968 while it averaged 1,427,160 in 1982. Non-manufacturing employment peaked at 1,513,150 in August 1979 and then declined to 1,417,310 by August 1982. Non-manufacturing employment rose from August 1982 to January 1983, but then began declining through June 1983. The number of people employed in the non-manufacturing sector was 1,419,000 as of August and at the current rate of recovery, an average of 1,416,530 persons will be employed in this sector in 1983.

Raw Steel Production

Indiana is the largest raw steel producing state in the nation. Raw steel production reached a high of 2.33 million tons in July 1979, with a high monthly average of 2.04 million tons. The monthly average dropped in each successive year to 1.37 million tons in 1983. Raw steel production reached a low of 1.10 million tons in December 1982, but has increased dramatically to 1.82 million tons in August 1983. With the current pace of the recovery, raw steel production is projected to average 1.63 million tons a month during 1983.

Clearly, the economic recovery is underway in Indiana. The economic recovery will continue to be slower in some sectors than in others. Most of the sectors mentioned in this article are experiencing the recovery, yet none of the sectors has reached its pre-recession levels. Although we have come some distance, there is a long way to go. □

Indiana Industrial Electricity Sales (in Millions of Kilowatt Hours)

City	*August*	*July*	*August*	*Percent Change From:*	
	1983	*1983*	*1982*	*Last Month*	*One Year Ago*
Anderson	19.9	22.0	22.2	−9.54	−10.35
Bedford	12.9	13.5	11.7	−4.43	10.26
Bloomington	4.6	4.3	4.4	6.98	4.55
Columbus	18.3	17.8	16.8	2.81	8.93
Connersville	10.1	10.1	8.8	.00	14.77
Crawfordsville	12.9	13.1	10.9	−1.52	18.35
East Chicago	20.9	19.8	20.1	5.56	3.98
Elkhart	24.6	23.8	21.2	3.36	16.04
Evansville	49.3	48.9	45.5	.82	8.35
Fort Wayne	46.8	49.6	42.1	−5.64	11.16
Frankfort	9.5	9.4	9.1	1.06	4.40
Gary	191.2	191.7	137.3	−.25	39.26
Goshen	10.9	11.0	9.3	−.90	17.20
Hammond	59.5	63.9	60.3	−6.88	−1.32
Huntington	4.8	5.2	4.7	−7.68	2.13
Indianapolis	377.7	345.3	334.8	9.38	12.81
Jeffersonville	4.9	5.6	4.8	−12.49	2.08
Kokomo	76.3	71.6	68.1	6.56	12.04
Lafayette	38.5	46.3	35.6	−16.84	8.15
LaPorte	13.6	13.8	13.3	−1.44	2.26
Logansport	10.2	7.9	8.1	29.11	25.93
Madison	2.8	3.6	2.4	−22.21	16.67
Marion	35.0	31.5	31.0	11.11	12.90
Michigan City	21.8	17.9	51.2	21.79	−57.41
Muncie	15.8	14.5	13.9	8.97	13.67
New Albany	4.7	5.3	4.8	−11.31	−2.07
New Castle	7.4	8.6	8.2	−13.94	−9.75
Peru	5.4	5.6	5.4	−3.56	.00
Richmond	30.2	23.9	26.0	26.36	16.15
Seymour	2.6	2.7	2.1	−3.69	23.81
South Bend	26.0	26.8	26.4	−2.98	−1.51
Terre Haute	24.4	23.9	25.8	2.09	−5.42
Valparaiso	8.6	7.7	8.9	11.69	−3.36
Vincennes	3.3	4.0	2.5	−17.49	32.00
Wabash	6.1	8.0	6.1	−23.74	.00
Indiana	1940.9	1923.2	1767.4	.92	9.82

Indiana Industrial Electricity Sales (in Millions of Kilowatt Hours)

	September	*August*	*September*	*Percent Change From:*	
City	*1983*	*1983*	*1982*	*Last Month*	*One Year Ago*
Anderson	21.4	19.9	21.1	7.54	1.42
Bedford	15.2	12.9	12.8	17.83	18.75
Bloomington	5.0	4.6	4.5	8.70	11.11
Columbus	17.6	18.3	15.8	–3.82	11.39
Connersville	10.5	10.1	8.3	3.96	26.51
Crawfordsville	12.9	12.9	10.6	.00	21.70
East Chicago	21.0	20.9	19.1	.48	9.95
Elkhart	24.5	24.6	19.4	–.40	26.29
Evansville	51.0	49.3	45.2	3.45	12.83
Fort Wayne	46.3	46.8	36.6	–1.06	26.50
Frankfort	8.7	9.5	7.5	–8.41	16.00
Gary	187.6	191.2	137.7	–1.87	36.24
Goshen	10.6	10.9	8.5	–2.74	24.71
Hammond	61.8	59.5	58.2	3.87	6.19
Huntington	5.9	4.8	4.8	22.92	22.92
Indianapolis	368.4	377.7	332.5	–2.45	10.80
Jeffersonville	6.2	4.9	5.4	26.53	14.81
Kokomo	80.4	76.3	67.8	5.37	18.58
Lafayette	47.6	38.5	39.1	23.64	21.74
LaPorte	13.1	13.6	13.0	–3.67	.77
Logansport	10.0	10.2	9.0	–1.95	11.11
Madison	3.6	2.8	2.5	28.57	44.00
Marion	31.7	35.0	29.0	–9.42	9.31
Michigan City	21.9	21.8	19.9	.46	10.05
Muncie	22.4	15.8	13.1	41.77	70.99
New Albany	5.4	4.7	4.8	14.89	12.50
New Castle	10.0	7.4	7.0	35.14	42.86
Peru	5.7	5.4	5.0	5.56	14.00
Richmond	26.4	30.2	24.0	–12.57	10.00
Seymour	2.9	2.6	2.5	11.54	16.00
South Bend	29.4	26.0	25.3	13.08	16.21
Terre Haute	30.5	24.4	27.8	25.00	9.71
Valparaiso	9.9	8.6	8.5	15.12	19.28
Vincennes	4.3	3.3	2.7	30.30	59.26
Wabash	5.0	6.1	6.2	–18.02	–19.34
Indiana	**1991.5**	**1940.9**	**1713.2**	**2.61**	**16.24**

United States and Indiana Business Indicators[1]
(Seasonally Adjusted Indexes Unless Otherwise Noted, Base Period: 1967 = 100)

	United States				Indiana			
Employment	*Latest Month*		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
Nonagricultural Employment	September	137.5	136.4	135.6	September	112.1	112.0	112.8
Manufacturing Employment	September	96.9	96.6	95.4	September	79.6	79.7	81.0
Average Weekly Hours (No.)[2]	September	40.7	40.2	38.9	September	41.7	41.0	39.2
Average Weekly Earnings ($)[2]	September	362.64	353.36	334.15	September	423.26	412.05	384.16
Nonmanufacturing Employment	September	154.5	153.3	152.6	September	134.1	133.8	134.3
Unemployment Rate (%)	September	9.1	9.4	10.1	September	9.4	9.3	12.2
Unemployment–Married Males (%)	September	6.1	6.3	7.2	–	–	–	–
Continued Unemployment Claims	–	–	–	–	–	–	–	–
Production								
Bituminous Coal Production	August	153.1	147.3	143.2	–	–	–	–
Industrial Electricity Production	June	141.8	139.0	131.0	–	–	–	–
Industrial Electricity Sales	–	–	–	–	September	171.8	167.4	147.4
Manufacturing Production	September	155.0	152.3	137.1	September	144.2	144.2	133.4
Raw Steel Production	August	69.3	68.5	54.8	September	127.4	123.7	97.4
Construction								
Construction Activity–Total	August	352.2	343.8	295.4	September	223.7	238.2	201.3
Residential Housing Starts	September	128.6	148.6	88.3	September	73.6	95.3	71.1
Residential Expenditures	August	473.5	465.2	286.2	September	289.5	307.5	193.5
Nonresidential Expenditures	August	299.3	290.7	305.2	September	175.4	182.3	181.8
Public Expenditures	August	205.0	199.2	203.3	–	–	–	–
Public Works and Utilities	–	–	–	–	September	214.7	233.0	242.6
Other Indicators								
Personal Income Per Capita ($)	July	11718.1	11665.4	11152.5	1983:2	10,500	10,359	9,889
Passenger Car Sales (Thousands)[2]	September	704.0	741.0	671.0	–	–	–	–
Year to Date (Thousands)	September	6783.0	6079.0	5948.0	–	–	–	–
Passenger Car Registrations (Thousands)	–	–	–	–	August	14.8	16.6	13.9
Year to Date (Thousands)	–	–	–	–	August	113.2	98.4	102.0

[1] Current Indicators Are Preliminary and Subject to Revision.
[2] Not Seasonally Adjusted.

United States and Indiana Business Indicators[1]
(Seasonally Adjusted Indexes Unless Otherwise Noted, Base Period: 1967=100)

	United States				*Indiana*			
	Latest Month		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
Nonagricultural Employment	June	136.4	135.9	135.5	June	110.9	111.2	113.2
Manufacturing Employment	June	95.4	95.1	97.3	June	78.7	78.1	83.6
Average Weekly Hours (No.)[2]	June	40.3	39.9	39.3	June	40.8	40.6	39.7
Average Weekly Earnings ($)[2]	June	355.04	350.32	334.05	June	408.82	405.59	388.66
Nonmanufacturing Employment	June	153.5	153.0	152.8	June	133.0	133.8	133.5
Unemployment Rate (%)	June	9.8	10.0	9.4	June	9.4	10.7	11.3
Unemployment–Married Males (%)	June	6.6	7.0	6.4	–	–	–	–
Continued Unemployment Claims	–	–	–	–	–	–	–	–
Production					–	–	–	–
Bituminous Coal	May	123.0	132.0	148.4	–	–	–	–
Industrial Electricity Production	March	133.5	130.8	135.1	June	162.6	154.6	150.3
Industrial Electricity Sales	–	–	–	–	June	141.4	138.6	137.6
Manufacturing Production	June	146.6	145.0	137.7	–	–	–	–
Raw Steel Production	–	–	–	–	June	222.0	217.3	189.4
Construction					June	83.1	74.9	66.0
Construction Activity–Total	April	316.3	314.9	288.4	June	293.0	276.7	176.3
Residential Housing Starts	June	136.0	140.0	70.8	June	164.9	168.4	177.7
Residential Expenditures	April	411.3	388.4	284.8	–	–	–	–
Nonresidential Expenditures	April	275.7	284.8	295.3	June	213.3	229.3	211.4
Public Expenditures	April	178.1	187.1	198.6	–	–	–	–
Public Works and Utilities	–	–	–	–	–	–	–	–
Other Indicators								
Personal Income Per Capita ($)	May	11623.2	11503.2	11078.1	83:1	10359.0	10234.0	9887.0
Passenger Car Sales (Thousands)[2]	June	904.0	837.0	651.0	–	–	–	–
Year to Date (Thousands)	June	4546.0	3642.0	4038.0	–	–	–	–
Passenger Car Registrations (Thousands)	–	–	–	–	May	16.3	15.3	15.6
Year to Date (Thousands)	–	–	–	–	May	64.5	48.2	62.7

[1] Current Indicators Are Preliminary and Subject to Revision.
[2] Not Seasonally Adjusted

U.S. and Indiana Man-Hours in Industrial Production
(Seasonally Adjusted Data)

	United States (Millions)				*Indiana*			
			Percent Change From				*Percent Change From*	
	Latest Month		*Previous Month*	*One Year Ago*	*Latest Month*		*Previous Month*	*One Year Ago*
Manufacturing	September	778.4	2.1	7.7	September	23273.1	1.9	4.7
Food	September	68.9	0.2	0.8	September	1529.4	5.0	–5.9
Apparel and Textiles	September	70.0	0.5	8.7	September	345.1	–1.2	–8.9
Lumber and Wood	September	27.3	–0.9	14.8	September	750.9	–1.0	22.0
Furniture	September	18.3	1.6	13.3	September	734.4	–3.2	11.2
Paper	September	27.6	1.8	4.1	September	461.5	–2.2	–13.0
Printing	September	46.8	1.4	0.1	September	1099.0	–1.2	–2.5
Chemicals	September	44.2	–0.1	0.6	September	1200.7	–4.6	–7.8
Petroleum and Products	September	8.6	0.0	–6.7	September	188.2	–3.5	2.2
Rubber and Plastics	September	31.1	2.1	12.0	September	1414.7	2.5	16.5
Stone, Clay and Glass	September	25.3	1.0	7.2	September	709.1	–6.7	–7.2
Primary Metals	September	35.2	2.9	6.3	September	3183.4	–2.8	1.2
Fabricated Metals	September	58.9	2.7	13.9	September	1989.5	3.8	6.4
Nonelectrical Machinery	September	81.1	0.4	1.1	September	2314.4	3.7	3.8
Electrical Machinery	September	85.0	2.2	9.6	September	3534.4	7.8	4.6
Transport Equipment	September	77.4	5.7	16.0	September	2937.5	2.7	3.2

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In this issue . . .

Along with the annual appearance of the jolly bell ringers on street corners and the advertisements for perfume on television, we offer our forecast for the year ahead. Tradition, this year, will be followed with glee.

There have been few times in the professional careers of the authors of this issue when the road ahead appeared to be so unencumbered. There is a considerable convergence of views about the year ahead, rather than the divergence normally present in the economics profession. Perhaps the smoothness of the road, with its progressive but not excessive rise, is but a mirage, a collective fantasy induced by ingestion of bad data washed down by euphoric libations. But if the path ahead is as smooth and wide as indicated here, then 1984 will be that prosperous and happy new year we wish our friends and faithful readers.

Morton J. Marcus
Editor

Indiana Business Review

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1984: The Second Year of Recovery

R. Jeffery Green

Professor of Economics, Indiana University, Bloomington

The U.S. economy performed better in 1983 than it has in any year since 1978. From the end of 1982 to the end of 1983 it is anticipated that constant dollar GNP will have risen 6.6%. As a result, the unemployment rate by the end of the year should be about 2.5 percentage points below its level a year earlier. These are remarkable achievements, but not unanticipated. In June our forecast was for a growth rate in excess of 5% for the last half of the year. That growth rate now appears to be near 7%. With this solid performance in the first year of the current recovery, what lies in store for 1984?

It is expected that economic growth will slow in 1984 from its torrid and unsustainable pace in 1983. From the end of 1983 to the end of 1984 constant dollar GNP should grow by about 4.5%. This would represent a solid second year of economic recovery and would produce a sufficient number of jobs to lower the unemployment rate to about 7.5% by the end of 1984.

The sectors of the economy which lead the recovery in 1983 are also expected to lead in 1984. The automobile industry, which posted large gains this year, is expected to reach a level of total sales in 1984 of 10 million units. If realized, this would be the best performance for the industry since 1979. Housing is expected to peak in 1984 with more than 1.8 million units started during the year, which would be the highest level since 1978.

In addition to these sources of strength, two others are expected to make major contributions to economic growth in 1984. The first is inventory investment. During 1982 and the first half of 1983, many firms had excess inventories in relation to the then-depressed levels of sales and, as a result, production was cut back to allow excess inventories to be reduced. By the second half of 1983, this process had been completed and production could rise to meet the higher level of sales. In 1984, not only will sales continue at healthy rates but firms will actually invest in inventories to bring inventories up to the higher level of sales. This inventory investment will be an additional source of demand and hence contribute to growth.

The other strong sector in 1984 will be business expenditures for plant and equipment. Normally plant and equipment investment expenditures continue to decline for some time after the rest of the economy has begun to recover. Last year the economy as a whole began to recover in the first quarter and investment expenditures turned up in the second quarter. This upturn is gaining in strength and will be a significant source of growth in 1984. The reasons for the increased levels of investment spending are not hard to find. The recovery itself in 1983 created both increased operating rates and increased profits. Thus, many firms found a need for modernization and, in some cases, capacity expansion occurring at the same time that the profits necessary to finance the expenditures were also rising. In addition, 1984 will be the first year since the passage of the 1981 tax bill that firms will be in a position to take full advantage of all of the investment incentives in the bill. The result of all this should be a very strong year for firms producing capital goods.

While we have identified a number of strong sectors in the economy in 1984, not all will show solid growth. The conspicuous exception will be the export sector which is expected to show little improvement in 1984. The combination of a slow recovery for our major trading partners (excluding Japan and Canada) and the appreciation of the U.S. dollar has reduced the demand for U.S. goods in foreign markets. This situation may improve in the last half of next year, but, for the year as a whole, exports will not contribute to economic growth.

Despite the forecast for solid economic growth in 1984, we expect no resurgence of inflation. In late 1982 and early 1983 consumer prices rose very slowly or even declined as excess inventories were reduced. By late 1983 consumer prices were rising at about a 5% annual rate and we expect the rate to average no more than 5 to 6% in 1984.

The optimism concerning inflation is based on the remarkable slowdown in labor costs during the last two years. Unit labor costs which rose by over 10% in both 1979 and 1980, and which rose by more than 7% in both 1981 and 1982, are currently increasing at less than a 3% rate. This deceleration in costs is a result of smaller wage gains in depressed labor markets and improved productivity accompanying the recovery. Labor costs, and hence total costs and prices, should continue to rise at moderate rates in 1984.

Special factors sometimes cause the behavior of prices to differ from the behavior of labor costs. The most common factors tend to be large agricultural or energy price movements. Agricultural prices may rise by more than 5% in 1984 because of reduced stocks of grains and smaller livestock herds, but energy prices should rise by less than 5% since there remains an excess supply of petroleum on world markets. Thus, barring an oil production curtailment in the Middle East, consumer prices should increase in line with labor costs in 1984.

The Federal Reserve remains committed to a long-term policy of attempting to keep inflation rates down by maintaining moderate rates of growth of the monetary aggregates. The combination of a stronger economy and modest monetary growth will produce some upward pressure on interest rates. However, with the economy slowing later in the year, we expect the increase in rates to be not much more than 100 basis points—indicating rates should continue well below their 1981 and 1982 levels.

The large federal deficits will continue into 1984. It now appears unlikely that any measures to reduce the deficit through higher taxes and/or lower spending will survive the election year politics of 1984. That will make deficit reduction a major priority for 1985. The large deficit could pose problems in terms of crowding out private investment in later years and problems of gigantic deficits in the next recession, but the deficit should not be a major economic problem in 1984.

Overall, with economic growth continuing, with inflation remaining moderate and with the unemployment rate continuing to decline, 1984 will be a very good year. The challenge to policy makers will to be provide a framework for a recovery that will extend well beyond its second year. □

The Indiana Economy in 1984

Morton J. Marcus

Research Economist, Division of Research, Indiana University Graduate School of Business

This forecast was prepared by Gary R. Albrecht, Cary A. Harmon, and Richard L. Pfister based on the national forecast reported above by R. Jeffery Green. Comments and interpretations are those of the author.

Nineteen eighty four is going to be a considerable improvement over 1983 for the economy of Indiana. Although the state will not grow as rapidly as the nation in the year ahead, the rate of economic expansion will be the best experienced by the state since 1978. These good prospects are the forecast of the Econometric Model of Indiana (EMI) prepared by the Division of Research in Indiana University's School of Business in cooperation with the Department of Economics in the College of Arts and Sciences.

In 1984, the state's personal income will rise by 7.8%, before adjustment for inflation, employment will grow by more than 82,000 jobs, and the number of persons unemployed will shrink by nearly 50,000. The gains for the state's businesses will be spread over virtually every sector. Rising incomes and falling unemployment will cut the state's unemployment benefit payments by nearly $120 million.

Personal Income Gains

The record of Indiana's personal income since 1976 is shown in **Table 1**. In nominal terms, before adjustment for inflation, personal income has grown each year. The I.U. *estimate for 1983* is $57.7 billion in personal income for the citizens of the state. This important figure is the basis for retail trade, the size of the market available to Hoosier businesses, and the source of tax revenues for our state and local governments. The EMI *forecast for 1984* is $62.2 billion, a growth of 7.8% in nominal terms, and of 3.5% after adjusting for price increases of approximately 4.3% in the year ahead.

Table 1
Indiana Personal Income (in billions of dollars)

			Percent Change	
Year	*Amount*	*Change*	*Nominal*	*Real*
1976	33.54	+3.46	+11.5	+6.0
1977	36.97	+3.43	+10.2	+4.2
1978	41.43	+4.46	+12.1	+4.7
1979	46.14	+4.71	+11.4	+2.2
1980	48.83	+2.69	+5.8	−4.0
1981	53.47	+4.64	+9.5	+1.0
1982	54.82	+1.35	+2.5	−3.1
1983	57.66	+2.84	+5.2	+1.2
1984	62.18	+5.14	+7.8	+3.5

From Table 1 it is easy to see that the forecasted gain in personal income for 1984 will be the largest, in absolute amount, in any of the nine years shown. If realized, the gain of $5.1 billion will be 22% greater than the combined gains of 1982 and 1983.

In real terms, adjusting for anticipated inflation, the advance in Indiana's personal income will be 3.5%, which exceeds the gain made in every year except 1979.

Indiana's expected nominal increase of 7.8% does not match the 8.6% increase forecast for personal income in the country as a whole for 1984. As a result, Indiana's share of personal income will continue to decline, slipping to 2.09% in 1984. This decline has been fairly continuous for more than a decade.

Employment Gains

The increased sales of automobiles and housing across the nation, plus a resurgence in business investment, will aid Indiana in the year ahead. A widespread recovery at the national level offers Hoosier businesses good opportunities for growth.

Final Indiana employment figures for 1983 will not be available for several months but, based on estimates made by the Division of Research, EMI forecasts an increase of 82,600 in total employment in 1984. (See **Figure 1** and **Table 2**.) Durable goods manufacturing activity, expanding along with the national economy, will account for about 38% of the increased employment activity, or 31,300 jobs. Some of these jobs will be filled by persons recalled from layoffs, but it is not possible to determine what percentage of the jobs are new and what percentage are being reinstated by callbacks. Much of the gain in

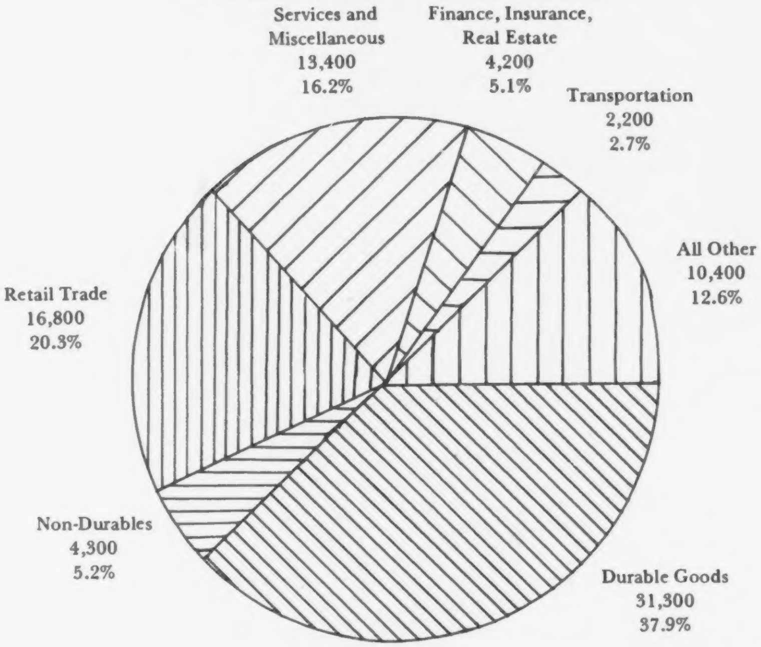
Table 2

Change in Employment, 1983-1984, By Sector

Sector	*Number*	*Percent*
Total	**+82,600**	+3.7
Manufacturing	+35,600	+6.2
Durable Goods	+31,300	+7.6
Furniture	+1,000	+5.8
Primary Metals (excluding steel)	+3,100	+10.2
Steel	+2,500	+4.7
Fabricated Metals	+3,800	+8.2
Non-electrical Machinery	+5.200	+8.8
Electrical Machinery	+6,800	+8.2
Transportation Equipment (excluding autos and parts)	+3,000	+9.9
Autos and Parts	+2,700	+6.8
Lumber and Wood	+900	+5.1
Stone, Clay, and Glass	+1,100	+5.9
Instruments	+1,100	+9.6
Other Durables	+100	+1.7
Non-Durables	+4,300	+2.9
Food	−100	−0.2
Apparel and Textiles	+400	+4.3
Printing and Publishing	+1,500	+5.2
Chemicals	+700	+2.6
Rubber and Plastics	+1,400	+4.2
Paper Products	+500	+4.4
Oil Refining	+100	+1.7
Other Non-Durables	−200	−7.8
Mining	+100	+0.6
Contract Construction	+1,300	+1.8
Transportation	+2,200	+4.2
Communications	+600	+2.6
Utilities	+400	+1.6
Wholesale Trade	+1,400	+1.5
Retail Trade	+16,800	+4.8
Finance, Insurance, and Real Estate	+4,200	+4.0
Services and Miscellaneous	+13,400	+3.7
Other Non-Agriculture	+4,900	+2.7
Agriculture	+200	+0.5
Federal Government	−100	−0.2
State and Local Government	+2,000	+0.7

Figure 1

Employment Gains in Indiana, 1983-1984



Total 82,600

output in manufacturing to date, and in the year ahead, will be achieved by increased productivity, either through the substitution of capital for labor in the production process or through the reorganization of tasks as work assignments and work rules are modified. In number of jobs, electric machinery appears to be the big winner, with 6,800 added positions.

The rate of employment gain in durables is 7.6%, considerably ahead of the growth rate for non-durable goods, which did not experience declines of equal magnitude during the recession. Non-durable goods manufacturing is expected to grow by 2.9%, adding 4,300 jobs.

As the economic expansion continues, it reinvigorates a wide range of economic activities. With more goods produced, transportation employment in Indiana is expected to grow by 2,200 (4.2%). Increases in construction activity will add 1,300 jobs. Higher levels of consumer spending will make 16,800 more jobs possible in retail trade. More consumer confidence leads to more sales of real estate and more financial activity, with growth in finance, insurance, and real estate forecast at 4,200 jobs. The business and personal services sectors are expected to add 13,400 jobs. Small gains are expected in some large sectors. For example, the addition of 2,000 jobs in state and local government will amount to a less than a 1% increase in number of jobs.

Beyond the Forecast

Changes in state law, as well as the continuing changes attributable to deregulation, could produce employment variations different from those shown in Table 2. For example, if the state legislature were to repeal the inventory tax (which may take years if a constitutional amendment is necessary), there could be a growth in selected manufacturing sectors, wholesale trade, and the transportation industry. If the inventory tax has kept businesses from locating or expanding in Indiana, the combination of a national economic expansion and the repeal of that tax in Indiana could lead to growth for all of these sectors in the state's economy. Deregulation in transportation (trucking, airlines, and bus and rail service) will continue to alter the number of jobs in that industry. Indiana's locational advantage might become a significant factor in the expansion of selected firms in this state. Realization of deregulation in telephone communications will have effects which are not part of this forecast, but which might offer Hoosier workers new opportunities in that dynamic, competitive environment.

Despite the good news of this forecast, jubilation should be restrained. The forecast calls for total employment in 1984 to average 2,312,000, which remains 6.7%, or 167,000 jobs, below the 1979 level. Unemployment is expected to average more than 215,000 for the year compared with 167,000 in 1979, despite a shrinkage in the labor force of 120,000 persons.

The expanding economy of 1984 offers us an opportunity to accelerate the economic development efforts of the state. If the hard lessons of the past few years are forgotten in a thoughtless euphoria, the state will be ill-prepared for the next (and inevitable) business downturn. In an expanding economy, it will be easier for the state to train its labor force, modernize its highways, restore its bridges, and provide for the education of its children. The restructuring of the state's economy is being done by market forces; the adaptation of the state to that restructuring by providing for its future is our collective challenge. ☐

Indianapolis

Robert J. Kirk

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Table 1
Multipliers by Selected Industries for Indianapolis Metropolitan Area

Industry	*Multiplier*
Transportation Equipment	2.7
Electrical Equipment	3.0
Petroleum Refining	1.7
New Hotels and Motels	3.0
New Office Buildings	3.2

The economic recovery has come to Indianapolis, as measured by employment gains in various sectors. The employment level of the Indianapolis metropolitan area is expected to increase by 4% during 1984. That translates into about 20,000 additional jobs on top of the Indianapolis employment base of 500,000 which, in turn, is one-fourth of the state's employment.

The recovery was initiated in the interest-rate-sensitive automobile and housing industries. Indianapolis-area automobile employment has increased by 28% from the business cycle trough; however, the current level is only 55% of the employment level at the business cycle peak in the first quarter of 1979. Housing permits have increased by 45% over 1982, a relatively weak year for housing. Home sales have increased 43% compared to the same period in 1982. Other evidence of the consumer-led recovery is provided by employment gains in the apparel and restaurant industries.

The impact of changes in the level of economic activity for various industries in the Indianapolis area can be measured in the short run by multiplier analysis. Table 1 lists multipliers for selected industries in Indianapolis. The multiplier is a way of measuring not only the direct, but also the indirect, effects of a change in the level of economic activity. For example, Western Electric has announced a phase-out of its Indianapolis plant, which currently employs 3,700 people. The multiplier of 3.0 for electrical equipment suggests that Western Electric, a firm in the electrical equipment industry, has a large number of suppliers, and Western's phase-out will significantly affect other firms. The smaller multiplier for the petroleum refining industry is based on the fact that much of the industry's inputs are purchased from outside the Indianapolis area. If changes in the industry's activity occurred, they would have a smaller effect locally.

The multipliers for construction are important because the construction of several new hotels and motels has been announced or started, along with the new domed stadium. The size of the construction multipliers indicates that new construction affects a number and variety of firms in the Indianapolis metropolitan area. Renovation of the Union Station, located near the domed stadium, has begun, and will make a major contribution to the revitalization of the southwest quadrant of the downtown area.

A stronger employment picture that allows persons to establish independent residence may provide a stronger financial environment for apartment managers. During the past year, weakness in occupancy rates has resulted in an inability to raise rents, resulting in cash flow problems and deferred maintenance.

Long Term Perspective

How well has Indianapolis performed compared to other metropolitan areas in the region with whom it competes, and to the national economy? The time period of the analysis is 1974 (peak in business cycle) to 1982 (recession). Table 2 lists the comparisons.

The impact of the recession beginning in 1979 on the Midwest is clearly shown.

Table 2
Employment Indices for Metropolitan Areas by Selected Categories, 1974-1982 (1974 = 100)

Metropolitan Area	*Total Establishment Employment*	*Manufacturing Employment*	*Service Employment*
Columbus, OH	108.8	83.1	135.6
Indianapolis	**108.5**	**86.1**	**142.8**
Cincinnati	106.1	88.4	131.0
St. Louis	105.4	83.2	131.4
Louisville	99.9	71.9	131.1
Chicago	99.6	75.7	126.9
Detroit	93.7	72.2	124.5
U.S.	**114.5**	**93.9**	**141.4**

Total employment in Indianapolis and Columbus was essentially the same, and was weak relative to that of the U.S. because of the Midwest's dependence on durable goods manufacturing. Indianapolis' service employment growth, however, was impressive. It exceeded the U.S.'s performance, although Indianapolis was part of a multistate region that experienced relative decline.

Service employment consists of a wide range of activities; important components are business, legal, and health services. Business service employment includes credit reporting, mailing, and data processing. A closer examination of the components of service employment for Indianapolis shows that business services was a primary contributor to the impressive rate of increase, especially during the late 1970s. Some tentative explanations for the strong performance include Adam Smith's idea that markets reach a size which enables them to support a variety of specialized service-providing firms. A related hypothesis is suggested by Nobel prize winner, George Stigler. In an article published several years ago, he pointed out that firms contract out specialized functions when the local market is large enough to support the specialized firm. Finally, economic development literature suggests that as an urban area grows, it will begin to provide goods and services that were previously imported. Thus, import substitution occurs.

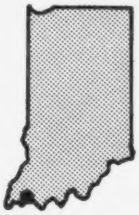
A different kind of indicator of performance, related to employment change, is the retention/attraction ratio. One way to determine how the area is perceived by persons particularly concerned with economic opportunity is to ask how the number of persons of a particular age group in 1970 changed over the decade—the retention/attraction ratio. If the ratio was 110, then for every 100 25 to 29-year-old persons in 1970 in an urban area, there were 110 35- to 39-year-old persons in 1980 in the urban area. Thus, population increase occurred because net inmigration during the 1970s and a better census count in 1980 were greater than deaths during the 1970s. Table 3 provides retention/attraction ratios for selected metropolitan areas for the 25 to 29 years-of-age group in 1970 (35 to 39 years in 1980) by sex.

The table indicates that Indianapolis did a slightly better job of keeping those who were 25 to 29 years old in 1970 over the 1970s decade than other metropolitan areas in the region, although the Indianapolis metropolitan area has experienced net outmigration since 1970. Anaheim and San Jose in California are listed for comparison. In separate research involving 73 metropolitan areas throughout the nation, I have observed that population shifts for age groups expected to be more responsive to differential economic opportunity (25-29 and 30-34 years of age) are positively associated with service sector employment growth and mild climates. Indianapolis may not have a mild climate but it has done relatively well in the area of service employment growth. □

Table 3
Retention/Attraction Ratios
for Selected Metropolitan Areas

Metropolitan Area	*Male*	*Female*
Indianapolis	**95**	**95**
Louisville	94	94
Chicago	92	92
Cincinnati	91	92
St. Louis	91	90
Detroit	90	91
Dayton	88	90
Anaheim	133	128
San Jose	108	106

Evansville



Maurice Tsai

Professor of Economics, University of Evansville

In 1983 the Evansville economy performed about 3% above the 1982 level despite a major local strike in the second quarter. The accompanying **Table** shows how the local economy performed in 1983. The outlook for 1984 is optimistic—continuous growth for various sectors, especially industrial production and retail sales.

In the coming year, industrial production is expected to grow due to continued prosperity. As consumer spending grows steadily, the demand for consumer durables should increase and should, therefore, benefit the Evansville area where the industrial structure is largely based on such products. The expansion of American automobile production affects this area indirectly through the increased demand for wheel parts and glass.

Prosperity and growing personal incomes mean increased consumer spending on nondurables and service items as well. Wholesale trade, retail sales, and medical services should grow at 3% in real terms. Automobile sales should fare much better in 1984 than in 1983. Residential construction showed some gains in the second quarter of 1982 when interest rates were declining. Thereafter, the trend continued upward but at a slower rate, since interest rates had gone up again. In 1984, residential construction is expected to continue its slow growth, probably more in the high-priced housing market. Business construction was very strong in the first half of 1983 and it continued to be so, although at a slightly slower pace, in the second half. In 1984 it will play a major role in maintaining local construction activities, about 5% above the 1983 level.

The financial sector enjoyed mild growth in 1983 and it will continue this trend in 1984, even though the inflation rate is subsiding while interest rates are not, creating a problem of high real interest rates. This will make lending activities more difficult. In addition, this sector is becoming more competitive as a result of deregulation and changes in the legal framework of financial institutions.

The weak spot in the local economy has been employment. The local strike in the second quarter resulted in some loss of jobs and potential jobs. Fortunately, the extremely hot weather last summer prompted recalls of workers by the refrigeration firm. In the second half of 1983, employment in trade and services also rose due to improved economic conditions. All these factors have contributed to fill up most of the jobs lost in the second quarter. The unemployment rate of this region has been above 10% for the first six months of 1983; the rate declined to 8.9% in September. It is expected that further improvement is probable in 1984; the unemployment rate will most likely drop below 8%. Throughout 1983 the local unemployment rate remained above the national rate, which was not the case in 1982 and earlier years.

The outlook for the 1984 Evansville economy is that it is going to be growing and prosperous, a definite departure from the 1980-82 period. The annual growth rate, in terms of the Evansville Area Business Index, is projected to be 3% or better. Industrial production, trade and services, and construction sectors will be the leaders in the upturn. The employment condition will certainly improve along the way. The economic base of this local economy, which has been widely diversified since 1957 when the departure of Chrysler left the economy in a shambles, has proved to be invaluable in avoiding another such catastrophe and in pulling out of this last recession. ☐

Evansville Area Business Index
(Revised. 1977 = 100)

Monthly Index	*Industrial Production*	*Trade and Services*	*Construction*	*Transportation*	*Finance*	*Employment*	*Composite Index*
1983							
January	103.58	103.90	125.49	93.54	107.42	102.34	105.06
February	108.56	100.90	126.29	90.15	106.26	100.82	105.40
March	103.39	100.69	132.48	92.35	97.31	97.29	103.42
April	100.43	100.70	128.68	88.38	104.75	96.86	102.08
May	106.27	102.49	131.38	90.51	103.82	96.91	105.03
June	102.39	104.30	131.88	89.47	101.30	97.40	104.21
July	107.16	104.87	110.68	90.41	103.41	100.08	104.66
August	108.78	107.42	112.36	90.97	105.04	102.14	106.62
September	112.07	107.14	98.37	92.42	106.28	103.00	106.59
Annual Index							
1981	108.83	102.28	107.63	98.94	97.75	105.57	105.01
1982	104.52	102.36	103.62	93.23	102.40	102.85	102.64
1983 (est.)	106.44	105.11	120.32	91.44	104.20	100.38	105.52
1984 (proj.)	110.00	108.25	126.00	93.00	105.00	102.80	108.45

South Bend-Elkhart

John E. Peck

Professor of Economics, Indiana University at South Bend

As we close out 1983, there is additional evidence to support the *IBR* forecasts over the last twelve months preducting that the South Bend and Elkhart economies are recovering from the recession of 1979-1983. Conditions in South Bend—like those in many of Indiana's industrial centers—have improved, but remain below levels attained in the pre-recession months of 1978 and 1979. Elkhart, however, has experienced a rebound of such spectacular proportions that the community's performance has attracted national attention.

Tables 1 and **2** give various indicators of local economic activity for the South Bend and Elkhart communities. The figures contained in the tables are seasonally adjusted and, with the exception of the unemployment rates, are index numbers expressed as a percentage of 1967 base-year values. In each table, comparative index numbers are averaged for 1978 (the last full year of somewhat "normal" activity experienced locally), 1982, and 1983 through August. Index numbers are also given for an August 1983 to August 1982 comparison.

South Bend

As evidenced in **Table 1**, average establishment employment of the first eight months of 1983 in the South Bend SMSA was up 1.8% over 1982 levels. More significantly, the 3.2% gain in employment from August 1982 to August 1983 suggests that most improvements were made in recent months. However, these figures are still a source of some concern since the rebound has been limited to the nonmanufacturing sector. The manufacturing indicator has been adversely influenced by the continuing loss of manufacturing employers and jobs from the area. The housing sector, which was severely depressed during the recession, continues to progress from 1982 levels. Currently the indicator of new permits issued is up 87% from the 1982 average.

While nonmanufacturing employment, housing construction, and vehicle sales have expanded, most indicators are still well below 1978 levels. Accordingly, we have considerable ground yet to cover. Several factors suggest a mild, sustained recovery throughout 1984 in the South Bend area. First, an expanding national economy will provide the primary stimulus for a rebound locally because this area is critically affected by national market conditions. Second, a recovery that is just beginning in business fixed investment is

Table 1
Selected Indicators For South Bend (Seasonally Adjusted: 1967 = 100)

Indicator	*August 1983*	*August 1982*	*Percent Change August 1982-August 1983*	*Average January-August 1983*	*1982 Monthly Average*	*1978 Monthly Average*	*Percent Change From Average 1982*	*Percent Change From Average 1978*
Employment Data								
Establishment Employment[1]								
Nonagricultural Employment	112.1	108.6	+3.2	110.9	108.9	113.5	+1.8	–2.3
Manufacturing Employment	74.9	80.5	–7.0	75.1	80.5	91.9	–6.7	–18.3
Nonmanufacturing Employment	135.5	126.2	+7.4	133.2	126.6	127.0	+5.2	+4.9
Unemployment Rate[1]	7.7	9.6	n/a	8.9	10.3	5.9	n/a	n/a
Help Wanted Index	69.2	53.0	+30.6	62.7	56.1	166.2	+11.7	–62.3
Utilities[2]								
Industrial Electricity Sales	121.9	127.4	–4.3	126.6	125.2	107.1	+1.1	+18.2
Commercial Gas Sales	114.0	114.6	–0.5	109.1	118.6	122.3	–8.0	–10.8
Industrial Gas Sales	68.9	82.8	–16.8	81.8	101.0	89.0	–19.0	–8.1
Retail Car and Truck Sales[1]								
New Passenger Car Sales	70.8	69.3	+2.2	77.8	76.3	135.1	+2.0	–42.4
New Truck Sales	158.4	126.9	+24.8	175.8	137.7	335.1	+27.7	–47.5
Housing Construction Data[3]								
Estimated Value of Permits	255.8	66.1	+287.0	223.9	116.3	400.0	+92.5	–44.0
Number of Permits Issued	85.6	20.7	+313.5	62.9	33.6	159.7	+87.2	–60.6
Average Value Per Permit	346.7	373.2	–7.1	383.8	370.3	265.2	+3.6	+44.7

[1] South Bend SMSA.
[2] City of South Bend.
[3] St. Joseph County excluding the cities of South Bend and Mishawaka.
Source: The Bureau of Busines and Economic Research, Indiana University at South Bend.

Table 2
Selected Indicators For Elkhart (Seasonally Adjusted: 1967 = 100)

Indicator	*August 1983*	*August 1982*	*Percent Change August 1982-August 1983*	*Average January-August 1983*	*1982 Monthly Average*	*1978 Monthly Average*	*Percent Change From*	
							Average 1982	*Average 1978*
Employment Data								
Establishment Employment[1]								
Nonagricultural Employment	147.3	124.7	+18.1	139.4	125.2	152.3	+11.3	−8.5
Manufacturing Employment	134.7	107.6	+25.2	124.4	107.7	145.1	+15.5	−14.3
Nonmanufacturing Employment	267.8	241.6	+10.8	260.1	243.0	262.7	+7.0	−1.0
Unemployment Rate[1]	6.0	9.8	n/a	7.1	10.5	4.9	n/a	n/a
Utilities[2]								
Industrial Electricity Sales	184.0	164.8	+11.6	169.6	165.3	150.4	+2.6	+12.8
Commercial Gas Sales	166.5	170.4	−2.3	159.8	166.8	166.0	−4.2	−3.7
Industrial Gas Sales	254.9	247.9	+2.8	260.9	250.5	240.3	+4.2	+8.6
Housing Construction Data[3]								
Estimated Value of Permits	216.0	100.0	+116.0	207.7	101.4	313.4	+104.8	−33.7
Number of Permits Issued	72.2	42.0	+71.9	80.8	44.3	184.3	+82.4	−56.2
Average Value Per Permit	295.3	235.9	+25.2	261.9	241.2	180.2	+8.6	+45.3

[1] Elkhart SMSA.
[2] City of Elkhart.
[3] Elkhart county excluding the Cities of Elkhart and Goshen.
All construction data has a base year of 1970.
Source: The Bureau of Business and Economic Research, Indiana University at South Bend.

good news for the South Bend area, since a sizable proportion of durable goods employment locally is centered in the capital goods sector. Twenty-three percent of manufacturing employment alone is comprised of electrical and nonelectrical machinery. Finally, the long-awaited impetus of AM General's work on the Hummer, which has been designed to replace the legendary Jeep, and which is scheduled to swell employment by some 800 jobs initially, will affect the local area in the spring of 1984 as production on the Hummer gets underway.

Given these and other factors influencing short-run conditions in South Bend, the local employment indicator should advance 3 to 4% (some 3,200 jobs) by the fourth quarter of 1984. Such a gain would continue the modest recovery that began locally in early 1983.

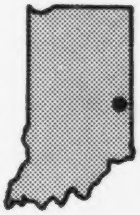
Elkhart

Indicators confirm that the recovery in Elkhart has been phenomenal. Nonagricultural employment was up 18.1% from August 1982 to August 1983—up more than 25% in manufacturing alone. A look at the data behind these numbers show that the recreational vehicle sector of Elkhart's economy has led the advance; 54% of the increase in manufacturing employment came directly from RV firms. Fabricated textile products and the rubber and plastic components of manufacturing led the nondurables sector—and a good-sized portion of that activity is also RV related. Elkhart had the sixth lowest unemployment rate of Indiana's ninety-two counties in August; it ranked twenty-seventh throughout 1982 and seventy-third in May 1980 when things were darkest in Elkhart.

Table 2 shows that the other indicators of Elkhart activity—energy sales and housing permits—are also improved, but as was the case in South Bend, pre-recession employment and housing levels have not been restored. Substantial improvement should continue, however, as prospects for local industries are generally felt to be very positive. The RV industry is working on the assumption that 1984 shipments will increase by some 13% after increasing nearly 25% in 1983. That level of performance would bring the industry back to about where it was in 1978, before the disastrous decline in 1979. Manufactured housing, another important local industry, should also see gains, possibly in the 20% to 25% range. Overall, the outlook for Elkhart is very optimistic. In fact, earlier *IBR* forecasts of the degree of recovery were too conservative. In light of the exceptional growth to date in Elkhart, one should expect employment to expand by another 5% to 6% (about 4,000 jobs) by early fall 1984.

Both the South Bend and Elkhart economies are recovering from the long recession, one faster than the other perhaps, but both steadily. ☐

Richmond



Ashton I. Veramallay

Director of the Center for Economic Education at Indiana University East

The Richmond area economy is recovering from the adverse effects of the 1981-82 recession. Local producer confidence is rising for the first time since 1981. In fact, about 90% of the firms surveyed expect better economic times ahead. This means that the trend of layoffs and idle plant capacity that was predominant in both the manufacturing and non-manufacturing sectors during the recession is being reversed. The prevailing conditions of lower inflation and higher consumer demands have contributed to this reversal. The enterprises which suffered the most during the economic slump, such as transportation equipment, electrical machinery, non-electrical machinery, construction, and real estate, can expect a robust fourth quarter this year and first two quarters of 1984. The local recovery will depend on conditions which are conducive to sustaining the national recovery.

If inflation reignites and real rates of interest remain relatively high, both producer confidence and consumer demand will be dampened. This, in turn, will abort the local recovery since Wayne county's economy is highly interdependent with and interrelated to the national economy. For example, a slump in auto sales at the national level has far-reaching effects in terms of employment, income, and output on the local economy, which is a key producer of transportation-related components.

In addition to improved producer confidence, there has been a rise in consumer confidence. Wholesale and retail trade is showing marked improvement as consumers release pent-up demand for durable goods. Consumers, being more certain about their job prospects, vis-a-vis the national economy, are spending again on big-ticket items such as home appliances, computers, video games, furniture, stereos, and televisions. Such increased consumer spending, aided by the growth in real personal income, will undoubtedly generate multiplier effects within the local economy. It is important to note that consumption spending accounts for a significant proportion of the gross local income. Therefore, retail sales will eventually set the pace for economic activity. Local retailers can expect an unusually favorable fourth quarter this year if consumers maintain their intense demand for durable goods. This phenomenon is quite the opposite of last year's gloomy performance which I had forecast.

However, behind this upbeat mood of producers and consumers, I detect a dark cloud. It involves the federal budget deficits which are projected to grow larger during the next four years. If discipline is not imposed upon deficit spending, there could be a resurgence of inflation beyond 1984. At present, I do not detect any strong inflationary pressures building up in the economy despite the trends in monetary aggregates and food prices.

Furthermore, a debt moratorium by the developing countries could seriously disrupt our national and local economic recovery by lowering output, employment, and exports, and by increasing the federal funds rate. An increase in this rate and other rates of interest will weaken automobile sales and housing activity. The moratorium would also cripple many commercial banks, push the U.S. economy to the brink of recession, and put the Federal Reserve Board in charge of both the debt crisis and the burgeoning national debt.

In summary, I expect a vigorous fourth-quarter recovery in the local economy with spin-off effects into mid-1984, depending on the overall strength of the U.S. economy. □

Muncie-Anderson

Robert R. Jost

Professor of Economics, Ball State University

On its first anniversary, the nation's robust recovery continues to make a shambles of last year's forecasts. The *IBR* forecast, which translated to almost a 5% real growth rate, measured from 1982:4 to 1983:4, is much closer to the 6.5% real growth experienced than last year's consensus forecasts. The *IBR* forecast for continued economic expansion in 1984 at 4 to 5% above the 1983 level has a probability of perhaps 70%, based on past business cycle history. Nevertheless, a less desirable scenario cannot be ruled out given uncertainty about interest rates, budget deficits, Federal Reserve policy, and less-developed-country (LDC) debt problems.

In June 1983, I reported that there was no recovery euphoria in the Muncie-Anderson SMSAs but that signs of a turnaround were evident. One of the signs was the Muncie Business Index compiled by the Bureau of Business Research at Ball State University. This index provides perspective on and a crude measure of the economic debacle that has plagued the Muncie economy. Based on 1967 = 100, the index peaked at 132 in December of 1977 and almost broached the 130 mark three more times in 1978. From 129 in December of 1978, the index has *generally* trended downward, bottoming at very close to 100 for five consecutive months—June through October of 1982. Fluctuations aside, a most modest uptrend can be traced from that point in 1982 to the latest reading of 112 in September 1983. Substantial gains were recorded for manufacturing, retailing, real estate transactions, and automobile and truck sales in September. Fourth-quarter activity should continue this upward trend, resulting in better times for Muncie businesses. Housing, represented by deed recordings, was reported up 47% from the first quarter of 1982, and these gains have been maintained through the first ten months of 1983. Nevertheless, these heady gains must be kept in perspective; remember that 1983 recordings are running 33% below those of 1978, and the same reasoning applies to the modest gains of the Muncie Business Index. In short, Muncie has a great deal of lost ground to make up before attaining 1978 levels.

The news media makes much ado about the relative unemployment rates in the Muncie and Anderson areas, as if this one measure provides an index of the economic well-being of these respective communities. Such usage has always posed serious statistical problems to the user, but given the definitional and methodological gymnastics the unemployment concept has undergone since 1973, the unemployment numbers can only be construed as seriously deficient in providing such information. Establishment employment, however, attempts to measure the number of jobs in a given area and, while by no means free of pitfalls, provides a significantly better avenue for assessing economic trends in an economy. An analysis of the accompanying Table provides a more meaningful perspective on structural changes and trends in the Muncie-Anderson SMSAs.

For the state, manufacturing as a percentage of establishment employment between 1973-83 declined from 37 to 28%, while nonmanufacturing increased from 63 to 72% of the establishment employment total. During the same period, Muncie witnessed a more dramatic relative decline in manufacturing—from 35 to 23% of establishment employment—whereas nonmanufacturing grew from 65 to 77% of Muncie's establishment employment, a figure significantly greater than that of the state. Comparable 1973 data is not available for Anderson, but for 1977, manufacturing still constituted 50% of establishment employment in Anderson; by 1983, it had declined to 40%. For the same time period, nonmanufacturing grew from 50 to 61% of establishment employment in Anderson, a figure which is still significantly below that of the state.

Some significant trends can be derived from the table. In terms of percentage changes, for example, Indiana's establishment employment declined 2.3% from 1973 to 1983, whereas manufacturing declined 26%. For the Muncie SMSA, the declines were 7.5% and a whopping 38.7%, respectively. In the years 1979-1983, establishment employment declined 11.5% in Indiana, 12.2% in Muncie, and a precipitous 17.7% in Anderson. Unquestionably, Anderson was much more severely hurt than Muncie by this economic debacle, but the differences in the unemployment numbers miserably fail to reveal the magnitude of the contrast. For manufacturing, from 1979 to 1983, the percentages dropped −23.4% for the state, −30.4% for Muncie, and −30.2% for Anderson. Nonmanufacturing, however, declined roughly 5% for each of the areas. Thus, these establishment employment declines from 1979 to 1983 mark a time of travail for both Indiana and the Muncie-Anderson SMSAs. Indeed, these data make the *IBR* econometric forecast for the state, which requires four years of strong recovery to get real wages and salaries back to 1979 levels, more palatable by comparison.

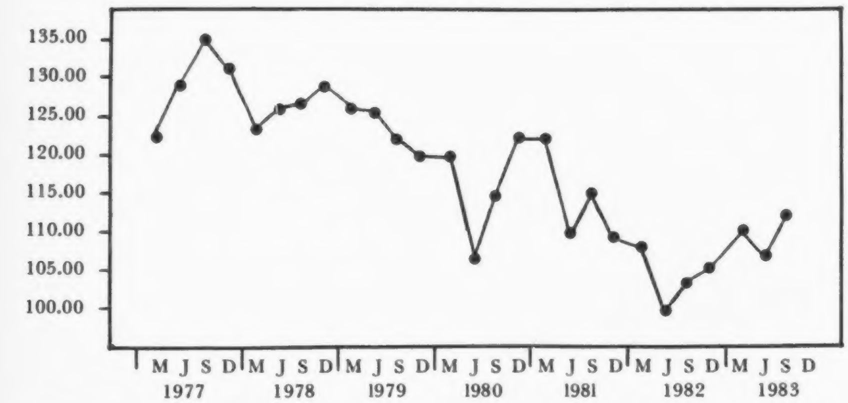
Still, recovery—although not exuberant—is in the making. The *monthly* figures for establishment employment for 1983 reveal a definite upward trend for Indiana

Establishment Employment Statistics for Muncie and Anderson SMSAs

Indiana	*1973*[1]	*% of EE*[2]	*1975*	*% of EE*	*1977*	*% of EE*	*1979*	*% of EE*	*1982*	*% of EE*	*1983*[3]	*% of EE*
Total Establishment Employment	2030.7	100.0%	1944.2	100.0%	2119.1	100.0%	2241.7	100.0%	2011.6	100.0%	1985.0	100.0%
Manufacturing	758.2	37.3%	647.2	33.3%	713.2	34.0%	733.2	33.0%	583.3	29.0%	561.6	28.3%
Durable	588.5	29.0%	492.3	25.3%	547.6	26.0%	564.8	25.2%	430.5	21.4%	410.8	20.7%
Nondurable	169.7	8.4%	154.9	8.0%	165.6	8.0%	168.4	7.5%	152.8	8.0%	150.8	7.6%
Nonmanufacturing	1269.8	63.0%	1294.4	67.0%	1400.8	66.1%	1503.1	67.1%	1427.0	71.0%	1421.2	71.6%
Muncie	*1973*	*% of EE*	*1975*	*% of EE*	*1977*	*% of EE*	*1979*	*% of EE*	*1982*	*% of EE*	*1983*	*% of EE*
Total Establishment Employment	48.3	100.0%	45.4	100.0%	48.9	100.0%	50.9	100.0%	45.4	100.0%	44.7	100.0%
Manufacturing	16.8	35.0%	14.3	31.4%	14.9	30.4%	14.8	29.0%	10.4	23.0%	10.3	23.0%
Durable	14.4	30.0%	11.8	26.0%	12.0	25.0%	12.9	25.3%	8.8	19.3%	8.6	19.2%
Nondurable	2.4	5.0%	2.5	5.5%	2.9	6.0%	1.9	3.7%	1.6	3.5%	1.6	3.8%
Nonmanufacturing	31.3	65.0%	31.0	68.3%	34.0	70.0%	36.0	71.0%	35.0	77.1%	34.4	77.0%
Anderson	*1973*	*% of EE*	*1975*	*% of EE*	*1977*	*% of EE*	*1979*	*% of EE*	*1982*	*% of EE*	*1983*	*% of EE*
Total Establishment Employment			48.2	100.0%	52.4	100.0%	52.6	100.0%	42.4	100.0%	43.3	100.0%
Manufacturing			24.1	50.0%	25.9	50.0%	24.5	47.0%	16.8	40.0%	17.1	40.0%
Durable			22.0	45.6%	24.1	46.0%	22.6	43.0%	15.3	36.0%	15.6	36.0%
Nondurable			2.1	4.4%	1.8	3.4%	1.9	3.6%	1.5	3.5%	1.6	3.7%
Nonmanufacturing			24.1	50.0%	26.3	50.0%	28.1	53.4%	25.6	60.0%	26.6	61.0%

1. Figures under data columns are numbers of persons in thousands.
2. EE = Establishment Employment
3. Estimates for this year are based on 10 months of data. Columns may not add to 100 because of rounding.

Muncie Business Index



and Anderson and, to a much lesser degree, for Muncie. Anderson's recovery progress is primarily tied to 1983's improved auto production and sales.

The Guide division of GM has recalled over 900 workers since January and, with aggregate employment almost 5,000 has fewer than 300 workers on indefinite layoff. Guide is currently engaged in research and development in several nonautomotive areas—to wit, the manufacturing of furniture, medical supplies, military products, and accessories for tractors. Ventures into these areas would tend to mitigate the severity of the cyclical vicissitudes of the auto industry.

Delco, currently with 9,700 employees, has recalled more than 2,000 workers since January, with 2,250 yet on indefinite layoff; Delco's seniority call-back list now dates back to June 10, 1969. This firm recently announced the development of a new magnet which affords a 40 to 50% weight reduction in cranking motors. Some $68 million has been authorized for its production, about half of which will be invested in the Anderson complex. Additionally, Delco has opened a sales office in Tokyo, and both Guide and Delco are aggressively bidding to provide products for foreign automobiles being produced in the United States. Currently the local Delco battery plant supplies batteries to Honda of America. As the "world car" comes closer to reality, the future of auto plants in the Muncie-Anderson SMSAs will depend increasingly on the domestic auto industry's ability to vigorously apply high technology to auto and auto parts production, extract real wage concessions from labor, and produce a quality product that can compete in world markets. After a prolonged batting slump, one might argue that they are now on first base.

Anderson's Business Development Corporation is in the process of wooing prospective manufacturers with equity financing and low-interest loans. One hopes that Anderson's experience with the firms will prove more rewarding than that of Muncie's Industrial Revolving Fund. Originally funded with a $5 million federal grant, eight of the ten Muncie firms receiving loans failed; the two remaining firms continued in business—with a combined employment total of 57 employees. Identifying future growth industries and screening potentially successful firms appears to be no mean task for government officials. John Hannaford, former Associate Dean of the College of Business at Ball State University, is currently working with the Muncie Area Growth Industrial Council to attract employers to Muncie via a somewhat different route. They have obtained from the Indiana Employment Security Division a profile of the skills of the unemployed and a profile of the skills needed in various industries. A strong correlation will help to identify a target industry. In addition, the designated industry study will be reinforced by cataloguing the markets and suppliers of each two digit industry which is within a day's delivery time of Muncie. The booklet will be available early in 1984.

So, at last, the trend is upward, even if the progress is slow. The Muncie-Anderson recovery has begun. ☐

Fort Wayne

Thomas L. Guthrie

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Assuming that the prime signal of an economic recovery is a sustained increase in employment, then the Fort Wayne area economy has yet to recover. Specifically, nonagricultural payroll employment in the four-county metropolitan area[1] has not changed significantly since last December. This, however, is a significant improvement over the March 1979 to December 1982 period when the area economy lost 28,000 jobs—15% of its employment. To have stopped completely that rate of hemorrhaging in the last ten months is indeed noteworthy.

In fact, the news is even better; the final step in the phase-out of the International Harvester heavy-duty truck assembly plant directly affected approximately 1,700 jobs last July, and undoubtedly more when the ripple affect is considered. Therefore, a minimum of 1,700 jobs must have been created in the area economy just to maintain the overall level of employment in the last ten months.

The additional jobs resulted either from recall of laid-off employees or creation of new jobs. The Greater Fort Wayne Chamber of Commerce—in conjunction with the City of Fort Wayne—recently claimed responsibility for the creation of 1,700 jobs through September 1983. Given the general lack of growth thus far in cyclical employment in the lake states in this recovery—except Michigan, where auto industry employment dominates—the Chamber's claim appears valid.

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1. The area includes Adams, Allen, DeKalb and Wells counties. Effective June 30, 1983, the Fort Wayne metropolitan area (MSA) was redefined to include Whitley county and exclude Adams and Wells counties. However, employment data will not be switched to the new definition; accordingly, the forecast relates to the previous definition.

This is encouraging for two reasons. First, the 1,700 new jobs are certainly welcome; and second, it appears that the massive economic development effort of the Chamber and City is beginning to bear fruit.

Although trendless since last December, the technical low in employment of a seasonally adjusted 155,300 people occurred in August with termination of the IH employees. Primarily because the IH phase-out was announced a year in advance, the original 1983 forecast (November/December 1982 *IBR*) was for the cyclical low in employment to occur this last summer. Although the forecast appears likely to be realized, the employment changes thus far may also be attributed to statistical noise in the data series. Employment increased by 800 and 600 in September and October, respectively. At least one more month is needed to confirm a change in trend.

When area economic activity is measured by proxies other than employment, the signs are more encouraging, both in retailing and manufacturing. With respect to retailing, new auto sales through October 1983 totaled 9,006, compared with 7,440 for the comparable period in 1982.[2] Building permits issued in Allen county for the construction of new single-family houses totaled 374 through October 1983, compared with 189 through October 1982. Home sales in Allen county have increased more than 60% in the first ten months of 1983.[3]

With respect to manufacturing, industrial use of electricity is up 18.6% from October 1982 when compared to October 1983. The implied increase in activity apparently has been accommodated through a longer work week, rather than increased employment. Work week data are not reported for the Fort Wayne area, but for the state the work week in manufacturing increased from 39.2 to 41.7 hours between September 1982 and September 1983.

With respect to 1984, a 2 to 3% increase in area employment appears reasonable, based upon past cyclical recovery patterns and realization of the current consensus forecast of 4 to 5% real growth at the national level.

The typical cyclical recovery pattern for the area suggests a higher rate—in the 3 to 4% range; however, the forecast was lowered for two reasons.

First, as a result of the severe job losses in the Fort Wayne area since 1979, exposure to the roller coaster durable-goods sector has been reduced from 28% of total employment to less than 21%. Therefore, the peaks and valleys of the future should not be as pronounced.

Second, as a result of the severe economic decline, there may still be some employed labor not being utilized fully. Accordingly, additional economic expansion may occur without an increase in employment.

The 2 to 3% forecasted gain in employment translates into a 3,000 to 4,500 employment increase, given the current employment level.

The forecasted increase is based upon cyclical factors; therefore, any significant economic-development successes which bring new jobs to the area in 1984 will push actual employment gains above the forecast, assuming the forecast is realized. ☐

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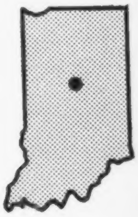
[2] Data provided by 17 of 20 members of Fort Wayne New Car Dealers Association.

[3] Data provided by Fort Wayne Board of Realtors.

Kokomo-Marion



Dilip Pendse

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The wheels of economic recovery have turned much faster in the Kokomo-Marion area during the first nine months of 1983 than had been expected. This has brought about a dramatic drop in the jobless rate, a surge in home construction and home repair activity, and a swelling of the business-industrial complex.

In Kokomo the unemployment rate plunged from 17.5% in January to 7.8% in September. During the same period, Marion's unemployment rate tumbled 6.2 percentage points to 8.6%, a two-year low. Logansport and Peru, the other two industrial centers in the area, also experienced significant declines in their jobless rates.

The dramatic turnaround in the unemployment rate can be attributed to such factors as a shrinking labor force, rising factory recalls, and new jobs. Currently, 11% of the work force at Delco, Kokomo's largest employer, is on indefinite layoff, compared to 30% a year ago. Similarly, 11% of the work force at Kokomo's Continental Steel is jobless, compared to 24% a year ago. Nearly 23% of Chrysler's workers in Kokomo are still jobless. However, the jobs at the Chrysler plant are more secure now because of the renegotiated loan agreement with the state of Indiana. In Marion, the work force at Fisher Body, Marion's largest employer, has swelled to 3,000, the highest level in ten years. It now employs 200 workers laid off by Delco. As in Marion and Kokomo, many of the laid-off workers from the Exide, Switches, Small Parts, and Elco plants in Logansport are back on their jobs.

Another bright spot in the Kokomo-Marion area's economy is the reopening of shutdown operations and the expansion and modernization of existing plants. The Owens-Illinois plant in Gas City reopened in June, thus providing jobs for 90 people. RCA's plant in Monticello is expected to reopen soon under new ownership, thus rekindling the hopes of 400 jobless people. The work force at Marion's SCM plant swelled from 200 to 300 because the parent company's operation in Brooklyn, New York, was moved to Marion. A $40-million expansion and modernization plan at the Fisher Body plant in Marion will create an additional 200 jobs by 1986. Kokomo's Continental Steel plant is undergoing a $22-million modernization program. Its new rod mill will begin operating in the second quarter of 1984. A $200 million plant expansion and modernization plan at Delco could mean jobs for 1,200 new and recalled workers by 1987. Along with Delco, the FMC plant in Tipton announced its expansion plans, thus creating jobs for 30 to 40 people in the near future.

The home construction and home repairs activity surged in the area with the improvement in the economy. For example, both in Kokomo and Howard County, the number of building permits issued during the first three quarters of 1983 was the highest since 1979. A total of 55 single-family building permits were issued in Kokomo and Howard County during the January-September period, up 150% from the same period a year ago. The number and the dollar amount of home mortgage and home improvement loans granted by Kokomo's lending institutions surpassed the levels reached in each of the last three years.

The inflation at the checkout stands at local grocery stores remained subdued during the first nine months of 1983. In Kokomo, during the January-September period, grocery prices advanced at an annual rate of 5.4%.

The Outlook

A survey conducted in October of 60 manufacturers, wholesalers, retailers, and contractors in Logansport indicates that a majority expect the business conditions to improve in 1984 in their own industry, in their own operation, and in the area. Forty-one percent of manufacturers indicated that the size of their work force will increase in 1984.

The survey findings, a dramatic turnaround in the area's economy, and the anticipated further improvement in the nation's economy next year suggest that Kokomo-Marion's economy will keep humming in 1984. The expansion and modernization of the existing operations in the area will also help improve the economic health.

In more than a year, Kokomo-Marion's economy will not be hobbled by jobless rates in the mid- to upper teens. Massive layoffs will not occur in 1984. The jobless rate in the area will remain in the single-digit range for most of 1984. In Kokomo and Marion, the jobless rate could reach as low as 6% next year.

The production levels will remain high in the local manufacturing plants. Sales will remain strong in such retail businesses as food, eating and drinking, jewelry, automobiles, and appliances.

For the second consecutive year, home construction and home improvement activity will improve in the area, but with less zip than in 1983. Interest rates on home mortgage loans will hover around 13%.

The odds are strongly against double-digit inflation in 1984. Inflation at the grocery counters will creep up and linger around 6 to 7% next year.

The Kokomo-Marion area economy will mirror the continued national improvement in 1984 with lower jobless rate, higher consumer spending, a lower inflation rate, stable interest rates. and higher spending on home construction and home repairs. ☐

Terre Haute

Marvin Fischbaum

Professor of Economics, Indiana State University

The economic recovery of Terre Haute in 1983 was stronger than had been forecasted, but was far from robust. Local conditions should continue to improve through 1984, but progress will be modest, and serious problems will persist.

A year ago Terre Haute faced, along with a slew of lesser difficulties, the closing of what had been its largest employer, the record and tape division of CBS. January 1983 marked the bottom of a four-year contraction in the area economy. Over that period, employment in manufacturing in the four-county metropolitan area fell nearly one-third to a level of 12,000, while unemployment in the area rose to an estimated 12,500. Over that same four-year period, employment in non-manufacturing establishments was relatively stable, falling 9% to 44,700. For 1983, local manufacturing was expected to improve along with the national economy. But concern was voiced that the previous declines in the manufacturing sector of the area export base might lead to subsequent reductions in dependent sectors such as retailing, services, and government.

The anatomy of the recovery differed from what was envisioned. Without seasonal adjustment, the four-county unemployment rate fell from its January peak of 15.5% to 10.1%, while the number of unemployed fell to 8,000. Allowing for seasonal factors, the drop in unemployment was more modest, from 13.9% to 11.2%, and part of that improvement might be attributed to a decline of 1.7% in the area labor force. Of the thirteen SMSAs in Indiana, Terre Haute's unemployment rate was fifth highest in January, and second highest in September. The surprise for 1983 was not so much that total employment improved, but rather, the composition of that improvement. Except for the return of the J.I. Case workers from an extended Christmas closing, manufacturing employment has been flat. However, employment did increase in retailing, services, and construction.

The mix of manufacturing industries found in Terre Haute experienced little growth nationally. The glass container industry suffers from overcapacity resulting from the growth in the market for plastic containers. Foundries and manufacturers of construction equipment still have not benefited from recovery. With cash-strapped farmers, and with the Payment In Kind program serving as an incentive to not grow crops, manufacturers of chemicals and pharmaceuticals for agribusiness experienced slow sales. But where liberalized federal regulations brought about a booming market for truck trailers, Great Dane in Brazil responded by calling back workers and by expanding plant capacity as well.

Much local construction activity grew out of weakness rather than strength. CBS will move Columbia House out of rented facilities and into its old record plant now undergoing renovation. Empty stores may have contributed to the decision to modernize the Meadows shopping center. Success in that project may have led to imitation at Southland. Weakness does not explain the decision of CBS-Sony to locate digital audio disc production in a refurbished CBS tape plant, nor does it explain continued expansion at Eli Lily. Most certainly, a soft local economy does not explain the decision to go ahead with the Village Quarter, a fifty-million-dollar planned unit development encompassing 425 dwelling units, along with offices and shops. Further gains in construction are difficult to envision, since, despite increased sales in the low- and moderate-price range, the local real estate market remains weak, and few local industries are straining capacity.

The growth of employment in retailing may be even harder to explain, and it too may stem from weakness. With Hills Department Stores moving into Woolco's, Lowell's No Frills replacing IGA, and with Meis Department Store abandoning downtown for the Meadows, merchants have engaged in a flurry of promotional activity. One finds longer hours, and very attractive prices. This is good for advertising media, and good for consumers; it is not so good for profits, and is probably not sustainable.

Out of 314 metropolitan areas, *Sales Marketing and Management*, in its estimates for 1983, places the Terre Haute SMSA, under its new two-county definition, 272nd, or near the bottom, in effective buying income per household, and 17th or near the top, in retail sales per household. Mail order sales from Columbia House help explain what would otherwise be an absurd situation. This illustrates that the economic base of a region goes beyond manufacturing, mining, and agriculture, and can include, in addition to mail order sales, such activities as educational services from two colleges and a University, and correctional and custodial services from the Terre Haute Federal Penitentiary. Unfortunately, record club sales are stagnant, higher education projections for the next eight years lack promise, and the Penitentiary is aging.

Income from sources other than wages and salaries provides another exogenous—or independent—base of support for the local economy. With its concentration of elderly people, the Terre Haute SMSA garners a high proportion of its personal income, 35% in 1981, from "unearned" sources. In 1981, $280 million from dividends, rent, and interest, together with $265 million from transfer payments, exceeded the $326 million in wage and proprietors income from manufacturing. This non-wage income certainly lends stability to the regional economy. But the demographic profile that accounts for this income results from previous decades of slow growth, and points to possible future decline.

The recovery of the U.S. economy, which had been strong, if spotty, in 1983, is expected to broaden in the coming year. That bodes well for Terre Haute, but the recovery will not remedy underlying structural weakness. ☐

Lafayette

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Dorothy Mansfield

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The outlook for the economy has improved substantially since December 1982. At long last, the consumer began to lead the economy on the path to recovery. After three years of recession or depression (depending on which industry one is concerned with), employment has once again improved substantially, incomes are rising and, for a change, inflation seems under control, at least for the near future.

As general economic activity improved through 1983, so did the economy of the Greater Lafayette area. Industries serving the electronics, telecommunications, computer, and housing markets were the major contributors to employment growth so far this year.[1] Total employment at Purdue, always a stabilizing feature of the local economy, actually contracted between October 1982 and October 1983. Retail sales have picked up smartly, more than 10% above levels of a year ago,[2] and retail sales employment appears to have hit new highs in the third quarter.[3]

The Lafayette economy has picked up faster than the economy in the state as a whole. Total employment in the state will probably not regain its peak 1979 levels until the end of 1984. In the Lafayette area, total establishment employment in January 1983 was 4,700 below its 1979 peak of 60,300 (See **Table 1**). But by October, 2,800 jobs had been recovered, most of those after employment hit a low of 52,800 in June of this year. Establishment employment was 58,400 in October, leaving us 1,900 jobs short of the 1979 peak. The percent of the Lafayette area work force that is employed was the highest since August 1982 (the "mini-recovery"), but remained several percentage points below 1979 levels. Employment gains through the first quarter of 1984 should bring us about two-thirds of the way back. Slower growth in 1984 will probably make employment gains less dramatic than in 1983, but we have an excellent chance of overtaking the 1979 mark by mid-year.

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[1] Employment in 25 major industries rose by 838 since January. These industries accounted for 51% of the gain. About 35% of the gain was in non-electrical machinery and primary metals.

[2] Based on a telephone survey of major retailers in late November.

[3] *Labor Market Letter*, November 1983, Indiana Employment Security Division, Lafayette, Indiana.

However, the structure of the economy in the Lafayette area will be somewhat different. Several major manufacturing employers permanently closed facilities during the recession, producing permanent job losses of about 500 employees.[4]

Other major employers, including some of the more newly established firms, plan little increase in employment during the next twelve months, even with the dramatic pickup in the economy.[5] However, the economy has recovered more quickly than expected, and new firms will be started to replace many of those that failed. This will undoubtedly contribute to employment growth that exceeds the (conservative) expectations expressed by many local employers.

Gains made in several industries have compensated for some of the manufacturing jobs lost. Wholesale and retail trade employers have made up 500 of the 700 jobs lost from the 1979 peak. Services and education each have added a net of 400 jobs *in excess of* the number lost from their peak levels in 1979 to January this year (**Table 1**).

Although erratic, building permits are showing a strong upward trend, indicating continued strength in the construction area.

Total deposits and per-capita real deposits have grown substantially. Consumers accumulated a substantial amount of liquid savings during the recession. The "excess" amounts of assets held in liquid form are now being converted to real assets such as cars and durables. People are doing the spending that they deferred during the past few years now that uncertainties about jobs and incomes have all but vanished for most consumers.

Total payroll grew from $625.1 million in 1979 to $744.4 million in 1982, an increase of 18%. However, the Consumer Price Index increased from 217.4 in 1979 to 289.1 in 1982, an increase of 33%. Thus, in real terms, the purchasing power of total payroll in the area has declined by 14% since 1979.[6]

Overall, the economy of the Greater Lafayette area has improved since 1982, but there is still some distance to go before the 1979 levels of employment are reached again. This time, however, the prospective growth is based on strong fundamentals: consumer spending that could support the economy well into 1984 and the slight beginnings of an overdue surge in capital spending that could easily pick up any slack generated by a slowdown in consumer spending. Interest rates remain historically high, but strong sales, potential cost savings embodied in new equipment, and the high cost of maintaining and operating outdated facilities are pushing the expected return on investment high enough to begin to overcome the negative impact of high rates. Consumers have deferred spending, repaid debt, and built up a lot of liquidity. They too will increase spending, in spite of the high interest rates. Still, the recovery in Indiana will be slow in comparison to that of the nation as a whole, and the Greater Lafayette area cannot hope to be totally insulated from a relatively weaker statewide recovery. ☐

Table 1

Trends in Sectoral Establishment Employment for the Greater Lafayette-West Lafayette SMSA

Industry	*Peak 1979*	*January 1983*	*Change*	*Gains January-October 1983*	*Ten-Month Average, 1983*
Manufacturing	12,900	9,900	−3,000	1,000	10,400
Construction	2,700	1,400	−1,300	200	1,580
Transportation	1,600	1,700	+100	−100	1,600
Wholesale & Retail	12,000	11,300	−700	500	11,230
Services	9,200	9,100	−100	500	9,400
Government	2,600	2,200	−400	100	2,350
Education	17,600	17,500	−100	500	16,140
Finance	2,900	2,500	−400	100	2,600
Total	60,300	55,600	−4,700	2,800	55,230*

*The employment low of 52,800 occurred in June 1983. Thus, the average level of employment for the year will still be quite low.

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[4] At the time they were closed, approximately 450 employees lost their jobs. Normal operations provided jobs for about 680 employees. One plant was reopened under new ownership, saving about 50 jobs.

[5] Based on a non-random survey of 19 firms taken earlier in the year and reported on in the last issue of the *Indiana Business Review.*

[6] Based on covered payroll of the Indiana Employment Security Act which excludes railroads, small non-profit institutions, churches, and most agriculture.

Gary-Hammond-East Chicago (Calumet Area)

Leslie P. Singer

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It is not often that one can begin a new forecast by saying that last nine-months' projections were just about correct, within an approximately 1% margin of error, which is just about as much error as the "official" state or local employment figures display. As indicated in Table 1, the recovery appears to be limping along with a few twists and dips but very much on a steady course. We feel that, after a delay of about nine months, this region has finally caught up with the rest of the nation. We predict a healthy resurgence in manufacturing output, no further exit by local firms, a firming up of profits, some expansion in construction, and reasonable availability of credit from local banks and financial institutions at roughly constant rates for much of 1984 and 1985. The anticipated national rebound in capital formation will spur local production of steel and related products as the current, consumer-led recovery broadens and capital projects are taken off the shelves. Employment will, however, not fully participate with output in the rate of the current recovery. The process of trimming and slimming down will continue as expensive inputs such as labor and corporation bureaucrats are replaced at the margin by less expensive capital goods and electronic management.

In Table 2 we trace three months' moving averages of yearly differences in employment (in 1000s) showing how the current cycle in steel and total employment is related, in spite of minor discrepancies in timing, or phase, as it is called. Our forecast indicates that we are going to enter the gaining phase in 1984-85; that is, the cycle of differences will cross the zero axis and we shall be adding jobs, not losing jobs as we had done heretofore. The gains will, however, diminish as we reach the final stages of 1985 and, if the cycle is true to its past performance, a new downturn may be in the offing in 1986 or 1987. The vexing question remains of whether the global market for American steel, the lifeblood of the regional economy, is shrinking and possibly in danger of collapse.

One must, of course, distinguish between what economists call effective demand and potential demand. Clearly there is globally excess potential demand for steel in the Third World; however, this demand cannot be translated into adequate buying power.

In order to purchase American steel, Third World nations must either acquire dollars or other hard currencies through trade, or through loans or gifts. It was in response to this potential demand, often anticipated as effective demand, that the enormous increase in global steel production capacity was initiated. As the original gifts and loans and oil-generated transfers of wealth began to recede, the gap between potential and effective demand widened.

American steel companies, which had for so long operated in relatively protected and prosperous markets under a system of price leadership, were totally unprepared for the new competitive global market in steel. Moreover, because of misunderstanding of international economics, international financial institutions provided capital for Third World steel plants, ostensibly to serve domestic Third World markets. But Third World countries were incapable of absorbing all of their potential steel output, because not enough bridges, hospitals, skyscrapers, or the like could be built. Furthermore, Third World countries needed to feed their expanding urban

Table 1
Northwest Indiana Employment and Forecast

	1981 June	*1982 June*	*1982 December*	*1983 March*	*1983 June*	*1983 September*	*1983 December*	*1984 March*	*1984 June*	*1984 September*	*1984 December*	*1985 March*	*1985 June*	*1985 September*
Total Employment	250.4	244.9	236.1	236.3	226.8	222.0	223.4	229.31	233.62	232.61	232.92	234.97	237.01	234.95
Export Sector: Manufacturing plus Construction	109.02	98.31	96.31	92.16	88.41	82.79	83.05	86.01	88.32	88.01	87.02	89.97	90.31	89.95
Steel Mills	60.7	59.2	53.2	52.4	47.5	48.4	49.3	51.8	52.2	55.9	53.7	55.8	54.7	54.1
Steel-Based Manufacturing: Manufacturing-Steel-Petroleum	28.3	24.5	23.2	22.2	19.01	19.2	19.3	19.7	20.8	20.1	19.9	20.9	21.9	21.4
Private Domestic Sector: Non-Manufacturing less government less construction	110.5	112.4	111.0	111.9	110.5	109.7	110.3	112.5	113.6	114.4	115.7	114.4	114.9	114.1
Public Sector	32.3	31.5	31.7	33.1	31.9	30.0	30.1	30.8	31.7	30.2	30.2	30.6	31.8	30.9
Domestic Service Sector: (retail, wholesale, finance, banking, etc.)	–	98.36	96.53	97.8	98.2	96.83	94.8	96.16	96.79	97.59	97.01	98.97	98.62	98.71
Health Care	16.0	17.9	17.9	18.0	18.2	18.2	18.0	17.8	17.7	17.8	17.6	17.6	17.6	17.8

Table 2

Three Months Moving Averages of 12 Months Differences in Employment

Steel Mills	*Total Employment*	*Dates of Differences*
7.70	25.77	3/79–3/78
7.70	33.80	6/79–6/78
2.70	23.51	9/79–9/78
3.00	16.13	12/79–12/78
.70	12.23	3/80–3/79
−4.10	1.83	6/80–6/79
−3.70	−4.30	9/80–9/79
−6.50	−10.70	12/80–12/79
−12.10	−22.53	3/81–3/80
−2.30	−17.60	6/81–6/80
−1.10	−9.83	9/81–9/80
1.10	−6.89	12/81–12/80
7.10	2.70	3/82–3/81
−1.50	−1.70	6/82–6/81
−4.90	−9.77	9/82–9/81
−9.70	−13.97	12/82–12/81
−10.70	−16.27	3/83–3/82
−11.20	−18.17	6/83–6/82
−7.80	−16.64	9/83–9/82
−3.60	−4.48	12/83–12/82
1.55	2.65	3/84–3/83
1.85	4.53	6/84–6/83
4.69	6.99	9/84–9/83
6.18	10.55	12/84–12/83
6.47	14.18	1/85–1/84
10.54	17.69	2/85–2/84
8.39	17.65	3/85–3/84
7.13	16.36	4/85–4/84
6.25	13.29	5/85–5/84
3.14	9.69	6/85–6/84
2.82	7.36	7/85–7/84
2.43	5.28	8/85–8/84
1.62	6.99	9/85–9/84

populations and also to produce luxury goods, synthetics, autos, appliances, and so on for their emerging social elite. Again, hard currencies were lacking. So, perplexing as this was, Third World countries discovered that they could sell steel in the U.S. more easily and profitably than textiles, curios, coffee, or exotic hides. Of course, this was possible because American steel was not internationally competitive, partly because of high wages. Ordinarily the high cost of capital in Third World countries would have redressed this imbalance of higher wages. However, we and other Western countries have extended loans to Third World economies at lower than our own domestic rates. The advantage, with our help, was consequently absolute.

In Table 3 we look at the regional economy in a structural context. We note the dramatic decline in production workers. We note that primary metals firms experienced a serious shrinkage of their gross margins (partly due to pressure from international markets). The rate of capital formation has not seriously lagged, yet the ratios of value added to payroll continued to decline.

This ratio, call it k, is central to the regional supply function. We suspect that firms establish a desired ratio, k^*. If the actual ratio k surpasses the desired ratio, firms are surprised and are induced to expand. The reverse is true of $k < k^*$. Ratios of desired to actual values are not new in economics; there are desired values of capital to actual capital stock of natural rates of interest compared to actual rates, and so on. Each divergence of desired or anticipated values from actual or expost values is supposed to trigger an expansionary or contractionary path in output or employment. Unfortunately, no one has yet devised a method of measuring the natural rate of interest or the desired stock of capital.

An Indiana University Northwest Research monograph (available on request) shows that significant empirical evidence exists in support of the contention that k^* is in the neighborhood of 2 for "normal" interest rates and slightly above 2 in periods of "high" real interest rates. Firms act as if they adopted an expansionary mode when $k > k^*$ and rising, while under identical macro conditions or phases of the business cycle firms tend to adopt a long-run contractionary mode when $k < k^*$ and falling. Table 3 shows that k is less than 2 in most cases.

If our theory is true, then Northwest Indiana cannot attain a long-run growth path, or indeed "full" recovery and "full" employment, unless $k \geqslant k^*$ for long enough periods of time to stimulate new capital formation and entrepreneural gains which do not become expropriated by labor. Such is not currently the case. ☐

Table 3

Northwest Indiana Historical Series and Long-Run Forecasts

	1964	*1970*	*1980*	*1981*	*1982*	*1983*	*1984*	*1985*
Total income in billions	–	2.467	6.642	6.955	6.454	6.686	7.271	7.974
Total payroll	1.0556	1.548	4.369	4.513	4.007	4.907	5.191	5.711
Nonmanufacturing payroll	.299	.528	1.959	1.994	1.857	2.503	2.585	2.871
Manufacturing payroll	.776	1.020	2.410	2.519	2.149	2.404	2.606	2.839
Value added, manufacturing	1.739	2.018	4.341	4.808	3.467	4.364	5.018	5.511
Value added, primary metals	2.234	1.744	1.352	1.513	1.424	1.773	1.818	1.911
Value added per ton primary metals	43.74	42.05	87.91	96.04	95.09	97.75	–	–
Average wage primary metals	7,951	9,688	24,318	27,695	27,588	27,071	–	–
Percent mark-up primary metals	76.61%	66.83%	49.93%	45.18%	43.10%	49.91%	–	–
Investments as percent of value added	21.67%	19.97%	17.91%	18.90%	19.93%	19.12%	–	–
Management as percent of work force	17.26%	20.60%	21.09%	20.56%	19.19%	19.81%		
Manufacturing production workers	84,940	80,501	72,330	72,060	60,591	62,040	64,152	66,348
Value added over payroll, manufacturing	2.241	1.978	1.801	1.909	1.613	1.899	1.989	2.011
Value aded over payroll, primary metals	2.234	1.744	1.352	1.513	1.424	1.773	–	–

Jeffersonville-New Albany (Louisville Area)

Fay Ross Greckel

Professor of Economics, Indiana University Southeast

This has been a year of economic recovery in the Louisville area. As usually happens in the early phases of a cyclical upswing, the gains were uneven: some sectors grew rapidly, others grew slowly, and employment lagged behind.

Housing and autos, the two sectors that fell the furthest during the preceding three or four years, showed the most dramatic improvement in 1983. The construction index in Table 1, for example, shows that construction activity peaked in 1979 at 151% of its 1967 level. By 1982 the index had plummeted below the 1967 base. During the first two quarters of 1983 the index regained half the points it had lost during the previous three years, and during the third quarter the construction index rose above its 1979 level.

Other indicators also point to a strong upswing in housing activity. Jefferson County, Kentucky, which includes the city of Louisville, issued three times as many building permits for residential units in the first nine months of 1983 as in the same period in 1982. The improvement in Indiana portion of the metropolitan area was somewhat more modest; still, Clark and Floyd Counties' 1983 residential building permits averaged 45% above the 1982 level. Similarly, realtors in these three counties reported a 50% increase in the number of homes sold. In fact, it appears that the 1983 real estate sales volume in Jefferson County will total more than 80% of the 1979 volume, while the dollar value of all property sold in that county is likely to be the highest on record.

Automobile sales in the three counties increased about 25% over last year, although that still leaves sales some 40% below the record levels of 1978. Louisville automotive production also turned upward in 1983, with the Ford Ranger truck plant now operating at a full overtime level. Slow sales of large trucks have kept Louisville's second Ford truck plant operating well below capacity, but Ford is predicting a 33% increase in large truck sales for 1984.

Industrial production in general improved modestly in 1983. The industrial production index (Table 1) rose from a low of 98% of the 1967 base level in early 1983 to 103% during the third quarter of the year. Manufacturing employment represents a major component of this index and, since production at many firms has become less labor intensive—and most employers work existing laborers overtime before undertaking extensive recalls—the index almost certainly understates the 1983 increase in industrial output.

Table 1

Economic Indexes, Louisville Area, 1979-1983 (Seasonally adjusted: 1967 = 100)

Time Period	*Industrial Production*	*Trade and Services*	*Construction*
1979	120.7	150.1	150.6
1980	107.1	141.1	122.8
1981	105.8	142.7	122.3
1982	98.4	143.7	97.7
1983:1	97.8	146.5	128.4
:2	99.0	149.1	119.0
:3	103.0	144.4	156.9

Source: Research Department, Louisville Area Chamber of Commerce.

Employment in the five-county metropolitan area (Clark and Floyd Counties in Indiana and Jefferson, Oldham, and Bullitt Counties in Kentucky) shows only slight improvement, but at least it appears to be moving in the desired direction after three years of steady decline. As Table 2 shows, total nonagricultural employment peaked at 402,700 in 1979 and then declined in 1980, 1981, and 1982, reaching a nadir of 359,700 (seasonally adjusted) in the fourth quarter of 1982. By the third quarter of 1983, there was a gain of approximately 6,700 jobs, leaving total employment just a few hundred jobs higher than one year earlier—but still 36,000 below the 1979 average.

Not surprisingly, manufacturing accounts for two-thirds of these job losses. Many of these job losses are cyclical, and the positions will reopen as both the local and national economies continue their recovery. Many other jobs have been lost permanently, however, as a result of plants closing, or firms becoming leaner in the face of stiff competition, or factories switching to more automated production processes. These structural changes will present major challenges to the Louisville economy in the years ahead. Some prognosticators seem optimistic that good substitute jobs will become available, but the majority outlook at present is more pessimistic. The primary concerns are that the better-paid new jobs will be rather few and will require very different skills from those acquired by the currently unemployed labor force. Most new jobs seem likely to be in nonmanufacturing, particularly the service sector, where average pay is much lower.

To the extent that the pessimists are correct, the Louisville area—and especially the families affected—will continue to face high social costs for a good many years. Virtually all social agencies reported a dramatic increase towards the end of 1983 in the demand for their services and in symptoms of major stress, such as spouse abuse and child abuse. In some areas the increase has halted in recent months, with service needs leveling off but not abating.

Table 2 also shows local unemployment rates, which, because of the difficulty of obtaining hard data at the local level, are less reliable statistics than the employment totals. These rates dropped sharply in 1983—particularly for residents of Clark and Floyd Counties. Unfortunately, since employment gains were limited this year, much of the statistical drop in unemployment is due to unemployed residents dropping out of the labor force (or to statistical error). In the months ahead, the local unemployment rates may stabilize, or even rise, if these discouraged workers move back into the labor force more rapidly than suitable jobs become available.

Table 2

Louisville Area Employment and Unemployment, 1979-1983[1]

Louisville Metropolitan Area (Five Counties)[2]	*Total Nonfarm Employment*	*Manufacturing Employment*	*Unemployment Rate (%)*
1979	402,700	109,400	5.2
1980	391,700	100,300	7.9
1981	383,400	96,500	9.0
1982:1[3]	375,500	93,300	10.6
:2	370,400	88,300	12.6
:3	366,000	85,600	11.3
:4	359,700	79,500	12.5
1983:1	364,400	87,600	10.7
:2	364,400	83,900	11.3
:3	366,400	85,000	9.9
Clark and Floyd Counties			
1979	46,800	12,100	6.3
1980	47,100	11,800	8.3
1981	48,200	12,300	10.6
1982	44,500	10,400	13.1
1983:1	44,200	9,800	12.1
:2	44,200	10,200	9.7
:3	43,800	10,200	8.2

1. The employment data refer to establishments located within the area cited; the unemployment data refer to residents of the area.

2. Includes Floyd and Clark counties in Indiana, and Jefferson, Oldham, and Bullitt counties in Kentucky.

3. All quarterly data are seasonally adjusted.

Barring any major unforeseen developments, employment gains should be much stronger in 1984. As the economy continues to strengthen, more and more firms will be expanding their work forces. Output and employment will increase in both the manufacturing and nonmanufacturing sectors. General Electric, for example, plans to recall 1,400 workers in January, and further gains should occur later in the year, as the demand for appliances for newly built homes and ten-year-old apartments materializes. Housing and auto sales should continue strong, unless interest rates unexpectedly surge upward again. Consumer spending, which rose rather modestly during most of 1983, should strengthen by the end of the year and continue to rise during 1984. In short, 1984 promises to be a year of continuing and strengthening recovery. However, as noted, structural problems will remain, with attendant hardships for many and with an ongoing need for efforts in economic development, for job counseling and job retraining, and for compassionate concern for the families still waiting for the recovery to materialize for them. ☐

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Banking in Indiana

IN THIS ISSUE

Cross-county banking legislation, among certain groups, rivals basketball in generating passion. This is not a topic that will soon have many pages of newsprint or minutes of television time devoted to it. As Brian Vargas and Terry Creeth demonstrate in their article, the general public is not much interested in the issue. To the extent that citizens of Indiana have thought about the question, they would favor some legislation permitting banks to extend their activities across county lines. On balance, Hoosiers anticipate that they would benefit from banks engaging in more aggressive geographic competition.

The passion surrounding the question of cross-county banking is confined to bankers, a portion of business community, a few academics, and a few members of the Indiana legislature. Among these few the intensity of feeling is high. Lines are drawn, interests identified, and allies courted, all to preserve or to change the status quo. Neutrality is permitted, but leaning to one side or another is immediately recognized as endorsement and presumed to be commitment for the duration. Wisdom lies in avoiding this question and the risks which could be realized by offending the forces arrayed in conflict.

Background

Current Indiana banking laws are founded on the careful work of the Study Commission for Indiana Financial Institutions appointed in 1931 by Governor Leslie. Walter S. Greenough served as Chairman and Herman B Wells as Secretary and Research Director.

The Commission's report was strongly influenced by "the unusually trying conditions of the unsettled post-war period from 1920 to 1932 [which] had brought in its wake such a devastating number of failures of banks and other financial institutions . . . . " Stability and safety for the depositors was a prime concern expressed in the report. Branching was not of prime importance because "the statistical study of the failure record of Indiana banks conducted by the Study Commission . . . proves conclusively that small banks and banks located in small communities have not failed at a greater rate than have the larger banks and banks located in larger cities." In prophetic conclusion the Commission stated, "If a branch-banking system is inevitable . . . it could come with much less disturbance in Indiana through gradual evolution than through forced organization . . . . in due time strong county-wide branch-banking systems will be clamoring for permission to merge into larger units. These county-wide systems will then be acquainted with the managerial problems involved in the successful operation of a multiple-office bank and consequently will be in better position to increase safely the number of their offices and extent of their territory."

The question is: Has "due time" passed since the Commission's report of 1932 to allow "gradual evolution"?

By 1968 Edward E. Edwards and Gerald C. Fischer in their "Banking Structure in Indiana" concluded that, "Indiana's banking structure would be improved if well-managed, locally owned banks could establish branches in their natural market area, without limitation as to county or home office protection, but subject to the test of public necessity or advantage." (See box, p. 25.)

It was the county line as the delimitor of the market area which Edwards and Fischer saw as inappropriate. They concluded that, "The high degree of concentration in most counties is not a result of too few banks but of a too restricted market area."

Current Studies

This issue of the *Indiana Business Review* contains several studies related to banking and Indiana. Ned Hill places our current concerns in a national perspective. Deregulation at the federal level plus significant technological advances and new market arrangements have placed banking in a more dynamic environment. Hoosier banking practices must be seen in this wider context of change. Today's environment is not one of crisis and failure as in the 1930s. Rather it is one of diverse competitive pressures in a world-wide restructuring of relationships.

Indiana's banking institutions are different from those of other states, as seen in the work of Hugh McLaughlin. Largely this is because of the persistent view maintained in Hoosier law that county lines are the logical boundaries of bank market areas. As William Dunkelberg and Jeffrey Shapiro demonstrate, the marketplace will adjust even if legislators will not. Hoosier borrowers are going about their business despite the limitations on Hoosier banking.

In the fifty years since the 1933 legislation, much has changed elsewhere. County boundaries are not restrictions for other types of commerce. We permit grocery chains to supply our food, local brewmasters do not slake our thirst, nor do local confectioners alone satisfy our desires for sweets. Who among us, if alive one hundred years ago, would have predicted that today banks alone would survive the sweep of history as local institutions? Hardware stores affiliate as chains, interstate corporations own hospitals and nursing homes, but banks remain nominally local. It is hard to imagine that the surveyors who laid out our county lines more than 150 years ago could have anticipated with such precision the natural boundaries for bank market areas. Not since Jasper and Newton Counties were separated over 100 years ago has a county line been changed. Must we conclude that banking market areas have likewise remained fixed?

Morton J. Marcus

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The Impact of the National Banking Environment on Indiana State Banking

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Currently, commercial banks in Indiana are not permitted to own or operate branches outside of the county in which the bank's main office is located. In addition, bank holding companies are not permitted to own more than one bank. In today's rapidly changing banking environment, a serious issue to address is whether or not Indiana would be better off economically by passing legislation to lift these restrictions.

Before pursuing the answer to this question, it may be helpful to survey the national banking scene. Indiana banking does not exist in a vacuum. It is strongly influenced by the shifting winds of national regulation and the growing surge of competition along many fronts. The purpose of this article is to explore recent banking trends which could have significant impact on Indiana institutions. It is possible that the banking debate, centered on the state level, could become a moot issue if present trends tug all parties along in the same swift current.

The National Environment for Banking

The national environment may be divided into three main components:

- **Regulatory.** National banking laws affect most of the commercial banks in Indiana. For example, national banks receive their charter from the Office of the Comptroller of the Currency and function according to regulations promulgated by the Federal Reserve System. Even state-chartered banks, if they are insured, come under the direct supervision of the Federal Deposit Insurance Corporation. National banking laws also require banks to observe state branching restrictions. Hence, federal regulations play an important role in determining the environment for commercial banking in Indiana. There is a very good chance these laws will soon change in a way that could significantly impact the question of geographical restrictions.
- **Commercial Bank Competition.** Indiana banks operate in direct or indirect competition to other banks both in and out of the state. Particularly the larger national banks in Indiana find themselves competing with other large national banks for loans and financial service business. Foreign banks also have grown dramatically in the past several years and compete very aggressively in the area of corporate lending.
- **Non-bank competition.** In recent years non-banks have become a primary source of direct competition for commercial banks in the areas of deposit gathering, credit extension, and other financial services. In the past, banks were mainly in competition with savings and loans and credit unions. Now retailers such as Sears, brokerage firms such as Merrill Lynch, and insurance firms such as Equitable Life have made major inroads into what has traditionally been banking.

The Regulatory Environment

There are two major national laws that most affect banking in Indiana. The first is the 1927 McFadden Act which requires national banks to honor state laws on branching and prohibits interstate banking. The second is the 1933 Glass-Steagall Act which prohibits banks from entering certain kinds of industries, such as securities brokering. Both of these laws are coming under close review by both the House and Senate and the atmosphere is "right" for major changes in both.

Senator Jake Garn (chairman of the Senate Banking Committee) is known to favor more deregulation of the financial industry. In a speech to the National Corporate Cash Managers Association in Atlanta in November 1982, Garn outlined the two alternatives facing Congress in dealing with the problems of the financial community: more regulation and deregulation. He strongly favors deregulation. The laws governing financial institutions are decades old, he said, and there have only been piecemeal attempts to change them. Therefore, he is conducting a major hearing in the Senate Banking Committee examining both the McFadden and Glass-Steagall Acts. His intent is a full overhaul of the system and not more patchwork legislation. Garn was the main force behind the recent legislation permitting banks to offer money market checking accounts and "Super NOW" accounts. He was also responsible for *not* imposing reserve requirements on money market funds when that issue arose several years ago. The bill he is working on now, according to his Atlanta speech, places high priority on intra-state mergers of financial institutions but would be more flexible than current practice in allowing inter-industry mergers of, for example, savings and loans with banks.

Representative Fernand St. Germain (chairman of the House Banking, Finance and Urban Affairs Committee) is also reviewing banking laws.[1] He, too, has strong leanings toward deregulation and has expressed his views in previous legislation. He has joined with Senator Garn in producing bills that have resulted in lifting interest rate ceilings, making Federal Reserve services more competitive with the private sector, and refusing to harness money market funds.

On February 2, 1983, President Ronald Reagan in his economic report to Congress recommended the elimination of geographic restrictions in banking.[2] "It is time to reconsider these restrictions because they are probably not in the best interests of consumers or the more efficient financial institutions," the President said. While he acknowledged that the restrictions may serve to reduce concentration on a national scale, he observed that the restrictions may also "increase market concentration and lessen competition in local markets." The President noted that the existence of loan production offices, Edge Act corporations, and bank holding companies is gradually eroding interstate banking restrictions. It is widely known that most of President Reagan's economic advisers favor deregulation in the banking industry.

The attitude on Capitol Hill toward deregulation can best be seen in legislation enacted to deregulate other industries.

[1] *Wall Street Journal*, January 10, 1983.

[2] *American Banker*, February 3, 1983.

Over the past several years, we have seen deregulation in natural gas, airlines, and communications, to name a few. Many ask, "Can the banking industry be far behind?"

Another manifestation of Washington's leanings toward deregulation in the financial industry can be seen in recent decisions regarding mergers. For example, a few months ago, the Federal Reserve Board gave permission for Citicorp in New York City (holding company for Citibank, one of the nation's largest commercial banks) to purchase Fidelity Federal Savings and Loan Association in San Francisco. Bank of America, headquartered in California, purchased the ailing Seattle First National Bank. National Steel Corporation was allowed to purchase savings and loan associations in several different states. There have been to date over thirty thrift industry mergers across state boundaries. A Philadelphia bank was granted permission to merge with a smaller commercial bank in Delaware. In fact, Delaware has now opened its borders for any out-of-state bank to apply for a branch. In New England, several states now permit out-of-state banks to own branches or entire banks within once sacred borders. The Southeast is close to permitting regional banking. In April 1984, Citicorp applied for permission to operate ten banks in nine states. Other banks quickly followed suit. There is a clear trend toward dissolving state lines in the banking industry. Many claim that interstate banking is already upon us. Perhaps it is not yet in the form some have thought it would take, but most aspects of interstate banking are allowed today under current regulations and made possible by modern technology.

Existing Interstate Banking Conditions

First, there are some bank holding companies that own branches in several states. Though that would not be allowed under today's laws, some bank holding companies were "grandfathered" when the Bank Holding Company Act law went into effect in 1956. First Interstate Bank is the most notable example. It operates 931 branches in eleven states with assets of $37.5 billion. Depositors from Utah, on vacation in California, can go to a First Interstate branch and withdraw money from their account with their bank card. In fact, they can enjoy all bank services except depositing funds (which violates the McFadden Act) anywhere in those eleven states. Last year First Interstate became the first U.S. bank to franchise its name. Though it cannot own branches outside the original eleven states, it plans on franchising branches all across the country—and then tying them all together with its computer network. First Interstate is unusual in that it was originally a multi-bank holding company already operating in many states. However, other banks can enter the interstate game as well.

The second aspect of interstate banking has been made possible by advances in transmitting, processing, and storing information by computers. Linking computers into communication networks may well provide interstate banking before the laws do. Over the past two or three years, most major banks and many smaller ones have formed cooperative networks. These networks make it possible to initiate a transfer of funds thousands of miles from the bank making the transfer. An automated teller machine (ATM) in Florida, for example, could be used by a customer who has an account in Maine to transfer funds from a savings account to a checking account. There are no technological reasons why a customer in any state could not receive virtually all banking services from a bank anywhere in the country. *Business Week*[3] reported that several banks, representing over $200 billion in assets in the U.S. and Canada, formed an agreement to share information in an ATM network involving 2,500 machines nationwide. The objective is to allow a customer to obtain bank services at any of these ATMs by using a magnetically encoded card. Customers will be able to withdraw funds, make deposits, inquire about balances, and transfer funds. Other networks have been organized recently. By now, virtually all medium and large banks are members of one or more networks. In fact, studies show that ATMs are not economically feasible unless they are shared by more than one institution in order to bring the volume up to breakeven levels.

For years, making loans—the banker's bread-and-butter business—has taken place across state lines. Citibank, for example, has loan production offices (LPOs) in all major cities in the U.S. and most major foreign cities. Their offices for loans and other services total 444 in thirty-nine states. Manufacturer's Hanover has 471 offices in thirty states.[4] In Indianapolis, it is common for bankers from New York City, Chicago, Detroit, Cleveland, California, and elsewhere to call on corporations to solicit loan and other business. It should be clear that this aspect of banking is not regulated by state or federal laws.

Another aspect of interstate banking is seen in the area of loan participations. One reason given for restrictions against intercounty and interstate banking is that there would be a danger that local deposits would flow out of the county or state of origin and thereby not benefit the home area. However, it has become even easier over the past several years for a smaller, local bank to engage in "loan participations." In a loan participation, one bank helps another bank provide a loan to a third party. The third party and the other bank may be outside the county or the state (or even the country). The point is that deposits can and often do flow outside the county of origin regardless of geographical laws which only impact the taking of deposits.

Commercial Bank Competition

Competition from other commercial banks, particularly out-of-state banks, has grown dramatically in the past several years. The expansion of loan production offices from large money center banks has already been mentioned. The result of aggressive attempts to win business has forced Indiana commercial banks to face increased competition from large Chicago and New York City banks. While it is difficult to obtain figures for the volume of loan business lost by Indiana banks to out-of-state banks, it is well known that many Indiana businesses—especially large ones—obtain many of their services away from home. One primary reason is that out-of-state banks are larger and therefore have larger lending limits.

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[3] *Business Week*, January 18, 1982: 70ff.

[4] "Product Lines, Geographic Markets," *Banker's Monthly*, May 15, 1982: 19-23.

Federal regulations require that national banks lend no more than 15% of their capital value to any one firm. Most banks set internal policies that will keep them well under this limit. This means that large corporations must turn to large banks to supply their credit needs. Since Indiana banks have been constrained in growth by the county banking restrictions, they are not large enough to supply credit needs for a substantial number of Indiana firms. Of the 300 largest banks in the country, Indiana boasts only three. Sister states that have more liberal banking laws, such as Ohio and Michigan, have fifteen and eleven, respectively.

Citicorp makes no apologies for its thinly-veiled efforts to set all the elements in place for national banking. With its acquisition of Fidelity Federal S&L in California, it has a branch network on the west coast. With its numerous loan production offices, it has a presence in thirty-nine states. With its branches all over New York (and now some even in Delaware), it is in an excellent position to take advantage of interstate banking which it believes is around the corner.

In contrast, Indiana commercial banks do not have such a presence. It is conceivable that Congress could pass interstate banking laws leaving Indiana banks in a vulnerable position relative to the Citicorps of the nation. Indiana banks do not have the experience managing large branch operations. They would not be well-suited to expand into new markets opened by interstate banking and would therefore be prime targets for takeovers by out-of-state banks. Since Indiana banks are also smaller than banks in other states, they might be perceived as more "digestable" targets for raiders than larger, stronger banks in other states.

One of the most significant players to enter the national banking market has been the foreign bank. To illustrate the dramatic growth of foreign banks, note that in Chicago in 1972 there was but one branch of a foreign bank. By 1978 that number had grown to forty-nine. In the New York City market in 1978, foreign banks made 37% of the total business loans.[5] Foreign banks offer terms that have altered the face of commercial lending in this country. For example, banks used to require balances in compensation for credit lines. Foreign banks made deals requiring no balances. Now, hardly a bank in the country requires balances. More significantly, the spread on commercial loans has been considerably reduced because of the presence of foreign competitors.

The chief complaint U.S. banks have against the foreign banks is that the latter do not operate under the same restrictions as U.S. banks. Their growth is not restricted as tightly since their deposit base comes from their home country where there are few geographical restrictions. They do not have the same capital requirements as U.S. banks and, therefore, can use higher leverage.

Non-bank Competition

In the past, savings and loan associations have competed with one another primarily in the deposit arena. S&Ls made mortgage loans and banks made personal and commercial loans. Over the years, the distinction between the two institutions has become quite blurred. Recently, the Federal Home Loan Bank Board gave S&Ls limited powers in making commercial loans. The intent is to gradually expand the limits until there are really no distinctions. Regulation Q already lists many depository accounts for which the interest rate differential between banks and S&Ls is nonexistent.

The S&L industry in recent years has become less regulated than banks. S&Ls may now freely branch anywhere in the state while their bank counterparts are still restricted to one county. S&Ls are much more likely to be able to merge across state lines (as indicated, over thirty have done so already).

In another arena, non-depository firms such as Merrill Lynch, American Express, Equitable Life, and many others are expanding the number of bank-like services offered. Exhibit 1 shows the extent of the competition. The banking and thrift community's exclusive right to gather deposits has been lost for good. In the financial service area, banks also face competition. Federal Express clears checks, Equitable Life offers credit lines and lock boxes, Commercial Finance offers a checking account with automatic loan provisions, and Sears has announced a money market account.

Of course, there are no geographical restrictions on these "banks." They may "branch" without making any application but a building permit. They keep no reserve requirements at the Federal Reserve Bank and are required to have no specific level of capital. They offer consumers most of the services they can get at banks and, because of lack of restrictions, can often do it at lower cost.

When Jake Garn came into office, the cry in the land (from bankers) was, "Regulate the money funds!" Since banks had to pay reserves on their deposits, why should money funds be exempt since both performed the same service? The answer from Garn and the Congress was no. Instead of more regulation, the country needs less—what is needed is more efficient financial markets.

With the sentiment in Washington leaning towards deregulation, the growing competition from unregulated non-banks and foreign banks, and the existence of statewide and interstate banking services, it is very likely that the McFadden Act could be repealed this year and that national banks would have permission to branch and merge either statewide, nationwide, or

5. John Porta, Continental Illinois National Bank and Trust, talk given at Indiana University, November 1979.

Exhibit 1

Competitive Financial Services[1]

	Take money/pay interest	Check-writing	Loans	Mortgages	Credit cards	Interstate branches	Money market	Securities	Insurance	Buy/rent real estate	Cash management acct.	Travel agency service	Car rental
Commercial banks	●	●	●	●									
American Express	●	●	●	●	●	●	●	●	●		●	●	
Merrill Lynch	●	●	●	●	●	●	●	●	●	●	●		
Prudential	●	●	●	●	●	●	●	●	●	●	●		
Sears	●	●	●	●	●	●		●	●	●		●	●
Transamerica	●	●	●	●	●	●				●			
Baldwin Piano	●	●	●	●	●	●			●	●		●	
Gulf & Western	●	●	●	●	●	●			●	●		●	
American General	●	●	●	●	●	●	●	●	●	●			
Beneficial	●	●	●	●	●	●			●				●
Household	●	●	●	●	●	●			●				●
Equitable Life	●	●	●	●	●	●	●		●		●		
Avco			●	●	●	●			●	●		●	
Dana	●	●	●	●	●	●			●	●			
RCA			●	●	●	●			●				●
Control Data	●		●	●	●	●			●	●			
E. F. Hutton	●	●	●		●	●	●	●	●				
General Electric	●		●		●	●			●				
National Steel	●	●	●		●	●				●			

[1] "What Banks Are Upset About," *Wall Street Journal,* October 5, 1981.

both. Then it is possible that states which do not allow state-chartered banks to branch could find themselves in an unusual position. National banks within their borders could branch anywhere but state banks would be limited to one county until the legislature could convene and consider the issue.

Conclusion

National banking and state-wide banking will come eventually—the only question is when. This year has all of the political ingredients necessary to effect more bank deregulation at the national level. President Reagan along with the two key banking committee chairmen in both the House and Senate favor a removal of geographical restrictions and other regulations they view as inefficient. If interstate banking occurs, Indiana banks may find themselves at a disadvantage in relation to out-of-state banks where restrictions have been less stringent. In addition, in one scenario, national banks could be given the right to free branching within the state, while state-chartered banks would have to wait for legislative approval from the statehouse.

Indiana banks, largely because of restrictive branching and holding company ownership, are not of the size that can service many growing Indiana businesses. Consequently, many businesses in Indiana seek the help of out-of-state banks to meet their growing needs.

Commercial banks are under increasing pressure from a new form of competition: non-depository institutions. Brokerage houses, retail firms, insurance companies, finance companies, and others have entered almost every facet of banking. These new participants have no geographical restrictions and few regulations, thereby creating the so-called "unlevel playing field."

The laws imposing geographical limitations on bank activities have become largely ineffective in accomplishing the purposes for which they were intended. Modern methods of electronic communication have overcome the barriers imposed by physical distances, thereby making funds flows unrestricted. Hence, it appears that the only effect of current state restrictions on banking is to impose private and social costs of doing business. Consumers and business alike bear the brunt of these costs in the form of local monopolies on banking services. These monopolies may deprive them of some services or force them to seek out these services in other locations but at higher costs of obtaining them ☐

Citizen's Perceptions of Banking Services in Indiana

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The recent proposal to change Indiana laws to allow cross-country banking was commonly perceived as a change that would allow big banks to proliferate branches in small counties and, thus, put the smaller, local banks out of business. The bill to change the law, as introduced, was written in the form of allowing "holding companies" so that large banks could acquire interests in banks in several counties in the state. Although defeated in the 1984 session, the same or similar bills will doubtless be introduced in future legislative sessions.

To determine the views of the electorate on such banking reform, the Department of Sociology and the Division of Business Research at Indiana University in Indianapolis conducted a survey of Indiana's registered voters. The survey measures attitudes about such change and also measures current use of banking and financial services in the state. Thus, it can serve as an aid to legislative and banking leaders in designing a new banking system to meet the needs of all people in Indiana.

Pretests revealed that most citizens perceived cross-county banking *only* in terms of the disappearance of their local bank in a wave of banks with the same name as Indianapolis banks. The legislation being considered, at this time, focuses on the ownership rather than either the name of these banks or the establishment of branches of the larger banks in the state. This misperception, which was not really correctable by explanation in the context of a study such as this one, had to be dealt with directly. Since we knew that citizens perceived the results of cross-county banking to be extensive "branching," we decided to ask about that form of banking change. In any terms, that would be both the most extensive kind of visible change and also the greatest impact of any banking law change, even though that is not what is being considered. The tactic was to measure citizens' perceptions of what they thought the change would mean to them, their communities, and the services they now receive if the change were to be made in its most extreme form—extensive branching of banks across county boundaries.

The Measurement Strategy

Several things seemed relevant to any evaluation of citizens' perceptions. Certainly, it was necessary to measure the extent to which people use banks and other financial institutions, both personally and in their jobs. Second, because much of the misperception alluded to above was based on a fear from more rural communities that they would lose service and control in the banking field, it was necessary to sample the entire state and assure adequate representation from small, rural counties. Third, general information about cross-county banking, either the current bill, past experience with such a practice (for example, having lived in a state with that system such as California), or the misperceived version discovered in pretesting, was going to be very important to any citizen evaluation of the proposed legal changes. It is important to note that during pretesting we experimented with several ways to explain the holding company bill under consideration and found the overwhelming majority of registered voters unfamiliar with the bill or the concept of a holding company. We were, therefore, forced into a measurement of the manner in which the bill was viewed by the typical registered voter in the state of Indiana.

Obviously, we needed to establish the degree of familiarity with the very concept of cross-county banking. This was necessary because recent research has found that up to 30% of respondents will volunteer opinions on fictitious or non-existent legislation if they are asked about it. We used a "filter" question to establish whether respondents even knew about the possible changes in banking laws before we asked whether they favored or opposed the legislation and whether they felt the legislation, if passed, would hurt or benefit them. This allows, during analysis, a comparison of the attitudes of the better-informed as opposed to the less-well-informed registered voters. Extensive background or demographic information was asked of each respondent, including things like age, marital status, length of residence, history of residence in other states, employment of both the respondent and his or her spouse, type of employment, sex, income, home ownership, and education. The set of demographics, combined with the information as to rural/urban residence and pattern of banking information and use, provided the potential for extensive assessment of registered voters' perceptions of possible impacts of changes in banking laws and the pattern of support or opposition for such changes.

The sample was chosen to represent the geographic diversity and variation in density of population across the state. Past experience has proven that in the sampling of registered voters, a stratified sample based upon choosing counties and then randomly selecting registered voters within them is very accurate. While not strictly random in selection, the error introduced is small and the statistics applied can assume randomness without undue error.

Fifty percent of Indiana's registered voters are located in only 10 of the 92 counties: Allen, Delaware, Elkhart, Lake, Madison, Marion, St. Joseph, Tippecanoe, Vanderburgh, and Vigo. Another 26% of registered voters reside in 23 counties: Bartholomew, Cass, Clark, Floyd, Gibson, Grant, Hamilton, Hancock, Hendricks, Howard, Henry, Jackson, Johnson, Kosciusko, Knox, Lawrence, LaPorte, Marshall, Morgan, Monroe, Porter, Shelby, and Wayne. The remaining 24% reside in the other 59 counties. Thus, the vast majority of the population is concentrated in a few counties and the rest of the state is predominantly rural.

Accordingly, the sample for the study used 50% respondents from the 10 largest counties, with each country represented proportionately to its percentage of the state's total voters. Then, 26% of the sample was taken from the next largest 23 counties, and the remaining 24% was taken from 10 randomly chosen counties out of the 59 rural ones. These 10 represent a good cross-section of small counties by several standards of comparison.

The final sample gave us 1,005 registered voters selected to represent the social and geographic diversity described. To allow for additional latitude because of the stratified nature of this sample, it can be assumed that the standard error of any percentage reported at 50% is 4%. That means a finding of 50% indicates we can believe 95% of the time that the true percentage is between 46% and 54%. As the results skew away from a 50-50 split (80% to 20%) the standard error drops off to no larger than 3%.

There are some sources of bias in this study, as in all survey research. However, given the size and diversity of the sample, the care to include a wide variety of residents of the state, and the random nature of selection within a county, the biases are small. It is important to remember that these are responses of registered voters. Many studies indicate these are more socially stable people than some residents. For example, they must meet length of residence requirements. Of course, they are all also over 18. This, we feel, is an important issue to this research. The population sampled is that which is most likely to be influenced by any changes in banking laws. They also have indicated, by their registration, a somewhat greater commitment to the local community and the state. Past experience in survey research in this state indicates this group is substantially more aware than non-registered citizens.

This survey used a telephone interview by trained professional interviewers. Telephone contacts were made from November 15, 1982, through November 21, 1982. In total, 1,682 phone calls were made to complete the 1,005 interviews used in this research. Of the 677 calls resulting in no interview, 227 were refusals to participate. This is a slightly higher than usual rate, but can be attributed to the fact that respondents were told we were interviewing about banking practices. Several people said they simply would not give such information over the telephone, even with assurances of confidentiality and that we were from Indiana University. Others, probably in response to the incredible increase in telephone solicitations, simply said they were not interested, even though assured we were not selling any product or service. Another 414 calls resulted in reaching disconnected numbers, wrong numbers, ill respondents who could not be interviewed, people too disoriented to be understood, and numbers changed to non-published numbers. This is a figure approximately proportional to past state-wide public opinion surveys we have conducted.

The last 36 calls resulted in partial interviews that were interrupted by the respondent for no apparent reason other than time. Despite repeated efforts we were unable to complete these interviews and they were dropped from the analysis. The average interview took approximately ten minutes. A heavy banking user's interview took about twice that time, but the results show there were few of these respondents.

Frequency Distribution of Results

The overall results reveal a surprisingly low level of reported use of banking services by our respondents. When asked about fifteen potential financial services that might be used personally, the average number of services used was only four. The services used were concentrated in a very few categories: 90% reported using a checking account, 81% reported using a savings account, 49% reported they borrow money, and 41% reported dealing in matters concerning insurance. Other services were seldom used. Only 17% reported dealing in matters concerning stocks, 16% use services regarding bonds, 2% buy or sell commodities, 19% transfer money, 19% buy or sell money market funds, 5% buy or sell mutual funds, 19% deal in matters concerning trusts or wills, 28% deal in matters concerning taxes, and 19% use at least one of three other services of a wide variety.

It should be emphasized that many of the services reported as used personally were not used at the respondent's bank. Many of the financial services are delivered to citizens by institutions other than banks. Thus, only 84% use a bank checking account, 67% use a bank savings account, 39% borrow money from their bank, and 9% deal with their bank in matters concerning insurance. A similar pattern shows up with most other services. Only 3% report dealing with their bank in matters regarding stocks, 6% in buying or selling bonds, 1% in buying or selling commodities, 1% in buying or selling mutual funds, 7% in matters concerning trusts or wills, 7% in matters concerning taxes, and 13% in using one of three services of a wide variety. Two areas stand out as particularly concentrated by users with their bank—transferring money (15%) and buying or selling money market funds (13%). Thus, many different institutions are used by people personally in dealing with financial matters. While banks are heavily used for checking and savings, they are in a highly competitive market when trying to deliver other personal financial services to their depositors.

A somewhat similar pattern was found when respondents were asked about financial services they used in their business. This was explicitly clarified, since they were told to indicate services used "in your job." Out of fifteen possible categories, identical to those asked in the area of personal services, the average number reported as used was actually less than one because over 76% of the respondents reported no business usage for financial services. Among those reporting using a financial service as part of their employment, the average number of services used was slightly less than three. Thirty-one percent use checking, 39% use savings accounts, 32% borrow money, and 24% deal in matters concerning insurance. Twenty-one percent of business users reported consulting a financial service for tax matters. Other uses are relatively few. Seventeen percent transfer money, 11% buy or sell stocks, less than 1% buy or sell bonds, less than 1% buy or sell commodities, less than 1% buy or sell money market funds, less than 1% buy or sell mutual funds, 1% deal with trusts or wills, and less than 1% deal in at least one of three other financial services.

As with personal uses, banks did not seem to be a focal point for use of the vast majority of these services. Seventy-three percent use their bank for checking, 31% for savings, 26% borrow at a bank, and only .6% deal with their bank on insurance matters. Virtually none of the business users (.05%) deal with their bank on taxes. However, a relatively high number (13%) use their bank to transfer funds. Only 2% use a bank for buying or selling stocks, 2% for buying or selling bonds, 2% for buying or selling commodities, .3% for buying or selling money market funds, almost 1% for dealing with mutual funds, and .04% for matters concerning trusts or wills. So, bank services are not heavily used by people in their business activities. Except for checking and borrowing money, business financial service users deal with institutions other than banks for most of their financial matters.

When asked what types of financial institutions they used, our respondents indicated a wide variety of institutions. For example, 42% use a savings and loan association. Sixty-five percent use a national bank. Thirty percent use a state bank. Thirty-six percent use a credit union. Finally, 4% report use of some other financial institution such as county/town or privately owned bank and insurance companies. This pattern confirms the earlier responses about the variety of financial institutions used by most Hoosiers.

When asked how frequently they visit their bank, our respondents indicated they were most likely to visit four times a month or less. About 8% reported very high use of their bank, at least twelve times a month. About 2% of the respondents (20 people) reported daily visits to their bank, and another 2% reported banking by mail. Thirty-nine percent of the respondents reported they used more than one bank. Given the data, it was impossible to establish if the services used were bank-specific or if services were used equally at what might be several banks used by respondents. It is also important to note the impact of modern technology on these reported uses of banks. Fully 18% of our sample reported using an electronic teller. This, almost certainly, accounts for the very frequent use reported by some people, since banks are not open every day.

As mentioned above, past research has indicated that respondents in surveys frequently volunteer opinions about fictitious or very obscure issues. To control for that syndrome, we used a filter question that asked all respondents, "Do you know what cross-county banking is?" Given the relatively specialized nature of the financial activities of our sample and their limited nature, it was not surprising to find that only 16% reported they knew what cross-county banking was (see **Table 1.**) To assure respondents knew what we were asking about and to match the common misperception of the proposed legislation, each respondent who indicated he or she did not know what cross-county banking meant was given an explanation of the most severe possible repercussions of a change in banking laws. The explanation given did not mention the milder holding company version of the legislation being considered, but concentrated on the apparent misperception that such changes meant extensive branching by large banks. The explanation read was as follows: "Presently by law, banks are not allowed to have offices or branches in more than one county. Cross-county banking would allow banks to cross county lines and have branches in adjoining counties. For example, banks would be allowed to have headquarters in one county and branches in other counties." After that explanation was given, respondents were asked if they favored or opposed cross-county banking (see **Table 2.**) Forty-four percent indicated they favored cross-county banking. Only 18% reported they opposed the extreme form of the banking change. A large percentage, 38%, indicated they did not know if they favored or opposed such a change. Our next measurement asked respondents to evaluate the impact of the legislation, as we described it in its most extreme form, on them *personally*. They were asked: "If legislation is passed which allows cross-county banking in Indiana, do you think it would benefit you or hurt you?" Thirty-four percent of our sample indicated they felt such a change would benefit them, while only 10% indicated such a change might hurt them. A large percentage, 54%, indicated they either had no opinion as to possible benefits/costs or they did not know what might be the impact of such legislation (**Table 3.**)

Table 1

Knowledge of Cross-county Banking

Question 7: Do you know what cross-county banking is?

	Number	*Percent*
Yes	161	16.1
No	798	79.6
Don't know/ no answer	46	4.4
Totals	**1,005**	**100.0**

Table 2

Attitude toward Cross-county Banking

Question 8: Do you favor or oppose cross-county banking?

	Number	*Percent*
Favor	439	43.8
Oppose	180	17.9
No opinion/ don't know	380	37.8
No answer	6	.4
Totals	**1,005**	**100.0**

We attempted to establish why respondents held the reported views as to the possible benefits or costs of the legislation as we described it. Those seeing the change as beneficial gave many different reasons. However, there was some clustering of responses. Nine percent of those seeing benefit saw the "reward" as enabling them to use their own bank when they were out of town or out of their county. Another 8% saw the changes as beneficial because they would allow more competition between banks. Seven percent also indicated a geographical mobility kind of benefit

Table 3

Perceptions of Benefits/Costs From Cross-county Banking

Question 9: If legislation is passed which allows cross-county banking in Indiana, do you think it would benefit you or hurt you?

	Number	*Percent*
Benefit	338	33.7
Hurt	99	9.9
No opinion/ don't know	545	54.3
No answer	23	2.1
Totals	**1,005**	**100.0**

when they indicated the change would make it easier for them to get money when they were out of town. Six percent expected easier access to their preferred bank if the legislation, as described, was enacted. Another 6% again mentioned the ease of getting money while traveling if the law were changed. The other 66% of the reported benefits were scattered in a number of categories including improved services, more financial knowledge from larger banks, and more funds (presumably bank assets) becoming available to the community and the people.

Those seeing the possible change in banking laws as hurting them were overwhelmingly concentrated in a single category. Over 32% of those seeing a possible cost to the extreme form of the legislation we described indicated the cost or hurt to them would be "large banks would take over the smaller banks!" Another 10% reported the change in bank organization would make banking more impersonal. These two categories alone account for almost one half of the reasons given by respondents who feel the enactment of such legislation would not be beneficial to them personally. These respondents also mentioned concerns such as their county might lose money, it is bad for their home territory, it would adversely lower the amount of funds available to people, and it would cost consumers more in bank charges.

Some additional flavor to these statistics is given by reporting some of the exact statements made by respondents in answer to the benefit/hurt question. A male, age 45, indicated the change would be a benefit because, "It leaves me free to purchase land in other counties more easily." A blue-collar worker indicated, "Free enterprise would increase because banking is better in surrounding areas." A female in her mid-thirties indicated she was very favorable to the proposed change because, "When traveling I must carry cash. I do not like charge cards and I get a poor response with traveler's checks." A furniture store manager indicated he would benefit from the change because, "It would make it easier for tax purposes and for running a business." A male public servant indicated the change would "create a competitive market in banks regarding services." A self-employed real estate broker indicated, "I live in a small town and it will probably modernize the banking here." A computer salesman indicated, "Business transactions would be improved, such as loan payments." A 32-year-old systems analyst reported he felt, "It would benefit business by expanding its scope, opening up banking services to new customers."

There was strong similarity in statements indicating opposition to the proposed changes because they would hurt the respondent. A 56-year-old male steam fitter indicated a common sentiment: "It would destroy interest rates and run small banks out—banks could set interest rates at their own pleasure." A female grocery store clerk indicated she would be hurt by the change because, "Large banks are too impersonal." A packing company employee indicated, "There should be one bank in each county." A nurse attributed possible hurt to the legislation as, "It would create a monopoly for big banks and the little guy would suffer with higher interest rates." A 25-year-old male delivery man said, "It would lend to other areas more than to my home county—the county would lose money." A state employee indicated that the change would hurt him because, "Mainly the power base in the state would run the smaller banks out of local ownership, like it happened with savings and loans." It should be noted that most respondents, about 55%, gave no reason since they had no opinion as to the possible hurt or benefit from the legislation. Still, the ratio of reasons for a possible benefit to reasons for possible harm was virtually four to one for those having opinions.

The answers to those questions concerning demographic items indicated the sample is representative of the general population of the state of Indiana. This sample was 51% female. Almost 62% of the respondents reported themselves as employed. Seventy-six percent reported themselves as married and 51% had children living with them. Almost 80% report they own their own home and the median time of residence at their present address was ten years. Thirty-five percent of the sample report they have lived in states other than Indiana. Educational level of respondents was consonant with recent census data at about 12.1 years. The mean family income of respondents in this survey fell in the $15,000 to $20,000 a year range. However, a significant number (18.2%) reported family incomes of over $30,000 a year. Given all of the above, we are confident the sample is representative of registered voters in the state of Indiana.

Because size of community seemed to have an important impact on citizens' reactions to the proposed legislation, our first analysis involved dividing the counties into three groups. The large group consisted of respondents from Allen, Lake, Marion, and St. Joseph counties. All of these have at least 100,000 registered voters and account for approximately one-third of all registered voters in the state. The medium-sized group consisted of respondents from Delaware, Grant, LaPorte, Madison, Monroe, Porter, Vanderburgh, and Vigo counties. All of these have between 40,000 and 97,000 voters. Counties in this range account for approximately one-third of the voters in Indiana. The small county group was composed of respondents from all other counties with a registered voter population of less than 40,000.

Table 4

Knowledge of Cross-county Banking by Size of County

	Size of County						
	Small		*Medium*		*Large*		
	N	%	N	%	N	%	Totals
Yes	64	16.5	34	14.0	63	16.9	161
No	307	79.1	199	82.2	291	78.2	797
No answer	17	4.4	9	3.7	18	4.8	44
Totals	388	100.0	242	100.0	372	100.0	1,002

The number of differences in the subsamples in response to the questions asked was surprisingly small. Indeed, as we shall show, there was virtually no difference by size of community on some of the key variables under examination in this research. In general, there was no difference in reported use of financial respondents from counties of differing size. The only strong exception to this was in the use of the service involving borrowing money. In large counties 46% of the respondents reported borrowing compared to 44% in the medium-sized counties and over 54% in the small counties. Either in personal or business use, the respondents reported no differences in service usage when divided into groups by size of county beyond this tendency for residents of small counties to be more likely to borrow money. Respondents from small and large counties were less likely to report using a savings and loan institution than respondents from medium-sized counties. The difference in reported use was about 10% (50% for the medium and 40% for small and large). Respondents from small counties reported using a national bank at the rate of 59% compared to a rate of 70% for respondents from large counties. State bank use was more likely to be reported by respondents from small counties than respondents from large counties. The small county rate was 37% while the large county rate was 26%. The reverse was true when it came to reporting the use of a credit union. Respondents from large counties reported a 41% usage rate for such institutions compared to only 27% in small counties.

Of crucial interest to this research are any differences in knowledge or support for the proposed law changes by size of county in which the respondents reside (**Table 4.**) There was no significant difference in the percent of respondents reporting knowledge of cross-county banking when they were divided into groups based upon size of county in which they resided. In all cases the "knowledge rate" was about 15%. After the explanation of the extreme form of the proposed change, the rates of favoring or opposing the cross-county banking proposal did not vary greatly (**Table 5.**) Respondents from small counties had 42% who favored the proposal and 22% who opposed it. Respondents from medium-sized counties had 48% who favored the proposal and 15% who opposed it. Respondents from large counties had 44% who favored the proposal and 15% who opposed it. The 7% difference in opposition between the small and large county residents in this sample is not significant at the 95% confidence level. This means that such a difference could be due to sampling error and a safe interpretation is that there is no significant difference in favoring or opposing the cross-county banking bill, as we described it, by the size of the county in which the respondent resides. Likewise, when asked to evaluate whether such a change would help or hurt them, there was no difference in response pattern across citizens from different-sized counties (**Table 6.**) Contrary to what might be expected from some of the quotations given above, there is no evidence in this survey that people from small counties are more or less likely to see cross-county banking as benefiting or hurting them personally. While there is a small tendency for respondents from small counties to report they see the legislation as likely to "hurt" them, the difference is not significant.

Table 5

Favor/oppose Cross-county Banking By Size of County

	Size of County			
	Small	*Medium*	*Large*	
	%	%	%	*Totals*
Favor	41.8	47.5	43.5	43.8% (439)
Oppose	21.9	15.3	15.3	17.9% (179)
No opinion/ don't know	35.6	37.2	40.9	37.9% (380)
No answer	.8	0.0	.3	.4% (4)
Totals	100.0 (388)	100.0 (242)	100.0 (372)	(1,002)

Further Analysis of Responses

In order to further explicate these findings, a multi-variate analysis was undertaken of this data. Our first concern was to establish if any differences in support or opposition for the proposed changes or feelings that they would help or hurt a respondent depended upon different demographic characteristics.

Employed persons were more likely to report they favored cross-county banking. The rate of approval was 48% to 37% among those not having regular employment. Among occupational categories, 59% of proprietors and managers favored the proposal and 16% opposed it. Several other groups, such as clerical workers and transportation workers, reported similar rates of approval. Fifty-three percent of machine operators favored the proposal and 3% opposed it, resulting in a 20-to-1 ratio in favor of it, the widest margin in favor.

Table 6

Perceived Benefit/hurt by Size of County

	Size of County			
	Small	*Medium*	*Large*	
	%	%	%	*Totals*
Benefit	33.5	32.6	34.7	33.7% (338)
Hurt	12.1	8.3	8.6	9.8% (99)
No opinion/ don't know	52.1	57.9	54.3	54.3% (544)
No answer	2.3	1.2	2.4	2.2% (21)
Totals	**100.0** **(388)**	**100.0** **(242)**	**100.0** **(372)**	**(1,002)**

Farmers, were much like proprietors in that 53% favored cross-county banking whereas only 18% opposed it, despite the concern voiced by some people that rural countries might be harmed by changes in the banking laws. The only occupational group showing significant opposition to the proposal was laborers, though they still favored it at a rate of 43% to 30%. The responses also indicated that among employed people there is a moderately strong relation between favoring the proposal and driving ten miles or more to work and back.

There is no apparent relation between marital status and favoring or opposing the proposal, though widowed people are much more likely to report they are undecided upon the issue. Having children living in the household with a respondent also had no effect on the rate of favoring or opposing cross-country banking. Among the married respondents, employment of spouse made no difference in the rate of reporting favoring or opposing cross-county banking. Home ownership or renting made no difference in the respondents' likelihood to report favoring or opposing. There was a slight tendency for people who report long terms of residence at the same address—generally over twenty years—to oppose cross-county banking. Past residence in other states, which increases the likelihood that someone might have been exposed to cross-county banking before, had no effect on the rate of support for the proposal. Among people who had lived in other states and those who had not, responses were similar—favoring the proposal about three to one, with one-third undecided.

Educational level of respondent influenced the likelihood of supporting cross-county banking. The crucial break seemed to be at the level of high school graduate. For people with a high school education or beyond, the proposal was favored at about a 50% to 18% rate. Family income showed no difference in rate of opposition across different levels, with the rate remaining in the high teens. However, the rate of support increased significantly as income rose. Over 50% of those respondents reporting family incomes above $30,000 per year indicated they support cross-county banking. Sex of respondent made no difference as to whether the respondent was likely to report favoring or opposing cross-county banking.

When asked specifically about whether such legislation would benefit or hurt them personally, analysis of the demographics of respondents revealed a pattern similar to that described above concerning favoring or opposing cross-county banking. Age, for example, showed no real effect on the respondent's likelihood to report either a benefit or some hurt from the proposed legislation.

Employed people were slightly more likely to see the change as beneficial, though among both the employed and unemployed the rate of seeing a benefit as opposed to a hurt was about four to one. The occupation of the respondent also influenced the rate of reporting a benefit from cross-county banking similar to the pattern described above, with one significant exception. While farmers were still more likely to report benefit than harm from the legislation (31% to 6%), they were much more likely than any other occupational group to report they did not know what the effect would be on them (63%). Miles driven to and from work revealed the same pattern as above; the farther one reported driving to work, the more likely he or she was to see the proposed legislation as beneficial.

Marital status and the presence of children in the household revealed the same relation to perceived benefit from the legislation as was revealed in the examination of support for cross-county banking. Home owners are more likely to be unable to assess the possible benefits from this legislation than renters, and they show it by responding "don't know" 57% of the time. In other ways, home ownership/renting showed a similar pattern to that described previously. In terms of length of residence at the same address another change occurs to the pattern. Among the long-term residents (over twenty years at the same address) there is not a higher perception of cost to the legislation (it should be recalled they were more likely to oppose the legislation), but a greater likelihood to report they do not know whether it will benefit them or hurt them if enacted. Living in another state at some time in the past made no difference in the respondents' report of whether they felt the legislation would benefit or hurt them.

The influence of educational level of respondent is the same as for the responses about favoring or not, with a modest increase at all levels in the number of respondents who report they do not know if the legislation will help or hurt them. The income of respondents influences their evaluation of the relative benefit of this legislation in an unexpected manner, given the findings on favorability to the proposal. As income increases, the number of "don't knows" concerning the relative benefits of the proposed legislation drops off by about 20%. Perception of benefit from the legislation tends to go up modestly with family income of respondent, but perception of harm tends to remain virtually constant across all categories of family income at about 9%. Again, sex of respondent shows no relationship to seeing cross-county banking legislation as a benefit or possibly harmful to the individual.

Much recent work in public opinion demonstrates that knowledge of a given issue is highly variable among any population. In addition, recent work shows that people will give opinions about an issue when they, in fact, know nothing about it. To remove any such defects or errors in measurement due to lack of knowledge, the questionnaire used in this research contained, as described, a question to measure what people thought they knew about cross-county banking. Without any explanations of the terms, 16.1% of the sample, or 161 respondents, volunteered they knew what "cross-county banking is." They may or may not have accurate information about the exact forms of the proposed legislation, but they had formed an opinion based on the term "cross-county banking."

To try to understand the distribution of responses reported, a special analysis was conducted of those that reported they knew what is meant by cross-county banking. The first attempt was to see if there was any variation in favoring or opposing the proposal of cross-county banking, whatever that meant to the individual, among those reporting they knew what the term meant, controlling for the size of the county in which they are living (see **Table 7**.) The results show a tendency for residents in larger counties to be more in favor, among those reporting they are aware of the proposal. However, due to the small number of cases, the difference is not significant and the majority of all three groups are in favor of cross-county banking. A similar analysis was conducted on the respondent's perception of the relative benefit or hurt if cross-county banking were to be implemented (**Table 8**.) While the numbers are small, there is again a tendency for those from small counties to see the passage of cross-county banking legislation, *as they understand it*, as hurting them. Because of the small numbers the difference is not statistically significant, but it is certainly suggestive. On the other hand, as shown with the favor/oppose data, no matter the size of the county of residence, the majority of the respondents indicating they knew what cross-county banking is felt they would benefit from such a practice.

Table 7

Favor/oppose Cross-county Banking By Size of County Among Respondents Indicating They Know about Cross-county Banking

	Size of County			
	Small	*Medium*	*Large*	
	%	%	%	*Totals*
Favor	54.9	68.1	71.4	63.9 (78)
Oppose	45.1	31.9	28.6	36.1 (44)
Totals	**100.0** **(51)**	**100.0** **(22)**	**100.0** **(49)**	**100.0** **(122)**

Table 8

Perceived Benefit/hurt by Size of County, Among Respondents Indicating They Know about Cross-county Banking

	Size of County			
	Small	*Medium*	*Large*	
	%	%	%	*Totals*
Benefit	61.5	70.0	79.4	70.4 (69)
Hurt	38.5	30.0	20.6	29.6 (29)
Totals	**100.0** **(39)**	**100.0** **(20)**	**100.0** **(39)**	**100.0** **(98)**

Given these results, it seems relevant to examine the relation between size of community, perceived benefit, and attitude toward cross-county banking. As shown in **Table 9**, it is perceived benefit or hurt from the legislation rather than size of community that has the most impact on attitude toward the legislation. Among respondents from all three sizes of communities, there was not a single person who favored cross-county banking that saw the legislation as hurting him or her. This makes sense, but it becomes doubly important when one realizes that this data is from among those that say they know what cross-county banking means. However, it is still also the case that the majority in every category favors the enactment of cross-county banking legislation *as they understand it*. This suggests some calculated self-interest must be at work among many of the registered voters interviewed in this study. It appears that the pre-existing definition of the proposed legislation as helpful or harmful has as much to do with favoring it or opposing it as does any other characteristic. This is an important aspect of the attitudes measured in this research and reinforces our feeling that much of this is virtually random because the bulk of the people we interviewed are uninformed about the issue and unlikely to be very active in any sort of financial or banking transactions.

Their use of banks, either in personal financial transactions or business transactions, seems to be relevant to respondents' possible views of any changes in the banking industry. As reported, a low level of use was reported by the bulk of the people interviewed in this study. Similarly, as reported, little variation by size of community exists in the level of service usage. However, level of usage varies by type, whether it is personal or business, by

Table 9

Perceived Benefit/hurt and Attitude Toward Cross-county Banking by Size of Community, Among Respondents Indicating They Know about Cross-county Banking

	Size of County			
	Small	*Medium*	*Large*	
Benefit	%	%	%	*Totals*
Favor	53.8	60.0	76.9	64.3
Oppose	2.6	0.0	2.6	2.0
No opinion	5.1	10.0	0.0	4.0
Hurt	%	%	%	*Totals*
Favor	0.0	0.0	0.0	0.0
Oppose	35.9	25.0	17.9	26.5
No opinion	2.6	5.0	2.6	3.2
Totals	**100.0** **(39)**	**100.0** **(20)**	**100.0** **(39)**	**100.0** **(98)**

size of community. As indicated in **Table 10**, relatively high users of banks seem to be concentrated in medium-sized counties, with the large counties having the lowest number of heavy users in both types of transactions. The percentage of respondents reporting no business use is highest in the large counties. On the other hand, when looking at personal financial services, the large counties have the lowest percentage of respondents reporting no use of their bank. While the differences are not statistically significant, they are important in revealing some of the possible differences a bank may appear to make to residents of a community.

Several multiple regressions were used to try to identify those variables that best explained variation in support or opposition for cross-county banking. No matter what variables were entered and what controls were imposed, including analysing only those that reported they knew about cross-county banking, it was not possible to explain more than about 10% of the variation in favorability. Indications again were that attitudes toward this legislation are largely random and not based on careful analysis of the merits or demerits of the proposal.

Conclusion

This research indicates there is little opposition to cross-county banking among registered voters in the state of Indiana. Those that do oppose the legislation as they understand it or when it is explained in a more extreme form are concentrated among the less affluent, less well-educated long-term residents of the state. There is no significant effect of size of community or character of community, (whether it is urban or rural) upon being favorable toward or opposing the legislation. There is opposition, as might be expected, from those who expect the change to hurt them.

Our research indicates that cross-county banking is a high threshold issue. This means that it is not a major issue for the bulk of voters in the state of Indiana. The vast majority of people do not know what it is and, even when it is explained to them, are either in favor of it or, at times, ambivalent about a change in the banking industry. It seems to be an issue of some interest to financial, social, and political elites. In most cases they are in favor of changing current practices because they view the existing system as somehow inefficient or not able to serve their needs in both personal and business financial transactions.

It is possible, though improbable, that dramatic media attention to the issue might make it more salient for voters in Indiana. However, the media attention since this data was collected has been favorable, for the most part, to changing the law to allow for holding companies. The issue remains a non-central one for the vast majority of voters. It is unlikely that this set of attitudes will change. The combination of significant citizen support for changing the banking system and a predominance of favorable media coverage indicates an issue that will remain a high threshold matter. The bulk of the citizens in the state will remain unaware and uninformed about the issue. A small minority will continue to oppose the changes proposed. The majority of registered voters, no matter their community of residence or their use of banking services, will be in favor of the change of banking laws.

While more analysis of this data is certainly possible, our preliminary application of more sophisticated techniques such as multiple regression indicates that the citizens of Indiana are uninvolved or ambivalent toward any change in the banking laws. Most of the attitudes uncovered in this research and reported above approach a high degree of randomness because of the lack of information about or concern for cross-county banking. There is little reason to believe that the situation will change in any meaningful way in the near future. □

Table 10

Level of Reported Service Use by Size of Community

	Size of Community		
	Small	*Medium*	*Large*
Mean number of personal services used	3.98	4.15	3.63
Percent reporting no personal services used	2.60	2.10	1.60
Percent reporting high personal use (more than 3 services used)	56.00	59.50	53.50
Mean number of business services used	.66	.46	.59
Percent reporting no business services used	73.00	76.00	79.50
Percent reporting high business use (more than 3 services used)	5.90	7.00	5.60
Total number of respondents	(388)	(242)	(372)

The Banking Structure in Indiana and Neighboring States

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Banks play a significant role in the economic health and vitality of the community and state in which they operate. They provide credit for new and growing families and businesses. They operate the payment system through which stores get currency and coin and checks are processed. Finally, they pay taxes which help support the operation of state and local governments. This study examines the banking structure found in Indiana and ten nearby states. It contrasts the types of geographic restrictions that banking organizations in these states are subject to and reviews the growth of deposits of individuals, partnerships, and corporations (IPC) in each of the states in the sample over the last twenty years. The study concludes with an analysis of the concentration of deposits in each county for banks, savings and loan associations, mutual savings banks, investment loan companies, and credit unions.

Types of Banking Structure

There are two means by which banking organizations can operate multiple offices and serve a wider geographic area: branch banking and multibank holding companies. Branches are defined as offices of a bank separate from its primary place of business which accept deposits and approve and disburse loans. The current Indiana banking laws allow branching anywhere within the county in which a bank is headquartered. There are banks in Indiana that operate offices outside the county in which they are located. However, these loan production offices cannot accept deposits or authorize loans; they can only solicit loans which must be processed at the head office.

Bank holding companies are corporations that own one or more banks. They are regulated by the Federal Reserve System and are limited to engaging in activities "closely related to banking." One-bank holding companies in Indiana engage in such other businesses as personal finance and mortgage banking. Multibank holding companies are not permitted in Indiana. It is currently only one of five states which do not permit a corporation to own or control more than one bank, that is, to operate as a multibank holding company. Each bank affiliated with a multibank holding company must be operated as a separate legal entity with its own board of directors and is subject to the capital adequacy and lending restrictions imposed on similar sized banks which are not part of multibank holding companies. The multibank holding company form of organization allows smaller banks to take advantage of the economies of scale and specialization that are available to larger banking organizations.

Compared to surrounding states, Indiana has significantly less concentration of banking resources on a statewide basis. Concentration refers to the percent of resources held or controlled by the four or eight largest banks. Here, concentration is being measured by the deposits of individuals, partnerships, and corporations (IPC). Three factors contribute to this:

- The lack of a regional, multi-state hub city such as Chicago, Detroit, Minneapolis, or St. Louis;
- The prohibition of multi-bank holding companies;
- The absence of statewide or contiguous-county branching powers.

Only Kentucky, out of the ten nearby states examined for purposes of comparison, has a combination of multi-bank holding company and branching laws which are as restrictive as Indiana's. Four states, Illinois, Minnesota, Missouri, and Wisconsin, have more restrictive branching laws in that they allow three or fewer full-service branches per bank or severely restrict placing new branches near existing offices of other banks. But, these states compensate for these restrictions by allowing multi-bank holding companies as a means of increasing an organization's size and realizing economies of scale. In fact, as of January 1, 1983, only eight out of the fifty states did not allow new multi-bank holding companies to be created within their borders. Kentucky, which has countywide branching like Indiana, just passed a multi-bank holding company law early in 1984, but after the research for this article was completed. The other states in the sample used for this study are Tennessee, which has countywide branching like Indiana; Michigan, Ohio, and Virginia, which allow contiguous-county branching; and North Carolina, a statewide branching state. All of these states allow multi-bank holding companies.

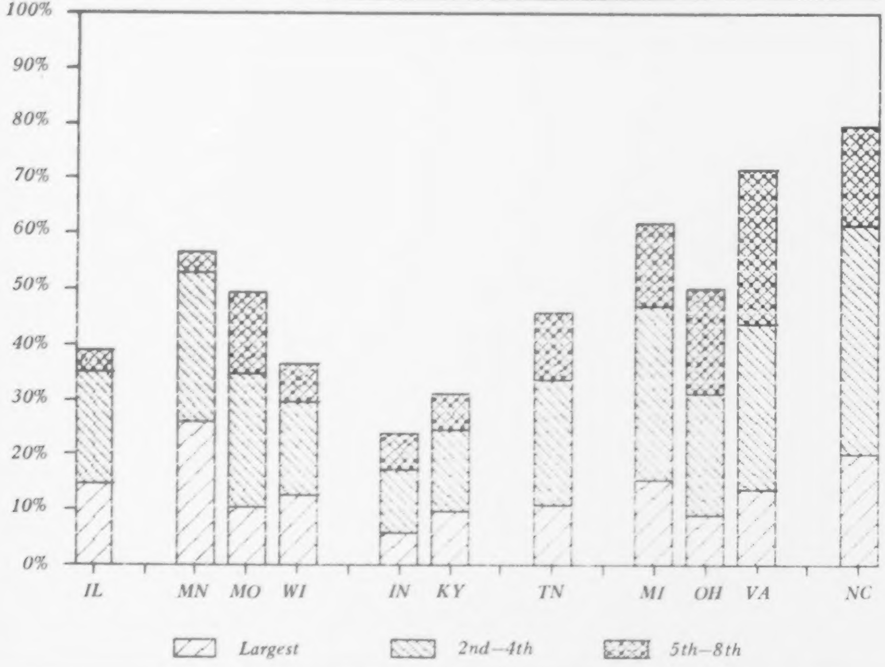
In 1982, the largest four banks in Indiana held 17.34% of the state's total IPC deposits. Kentucky is next lowest with a four-bank concentration ratio of 24.46%. Illinois, Missouri, Ohio, Tennessee, and Wisconsin all have top four banking organization ratios between 29 and 35%, with Michigan and Virginia having ratios over 40% and Minnesota and North Carolina having ratios of 52.8 and 61.6% respectively. **Exhibit 1** shows these four-firm concentration ratios in graphical form. It also displays the figures of a second widely-used concentration measure, the Herfindahl Index, which is sensitive to the market shares of the largest banks and the number of banks in a market. Once again, Indiana is the lowest in concentration by a significant margin–.0127 versus .0181 for Tennessee, the next lowest, and .1205 for Minnesota, the highest.

Branching Regulations

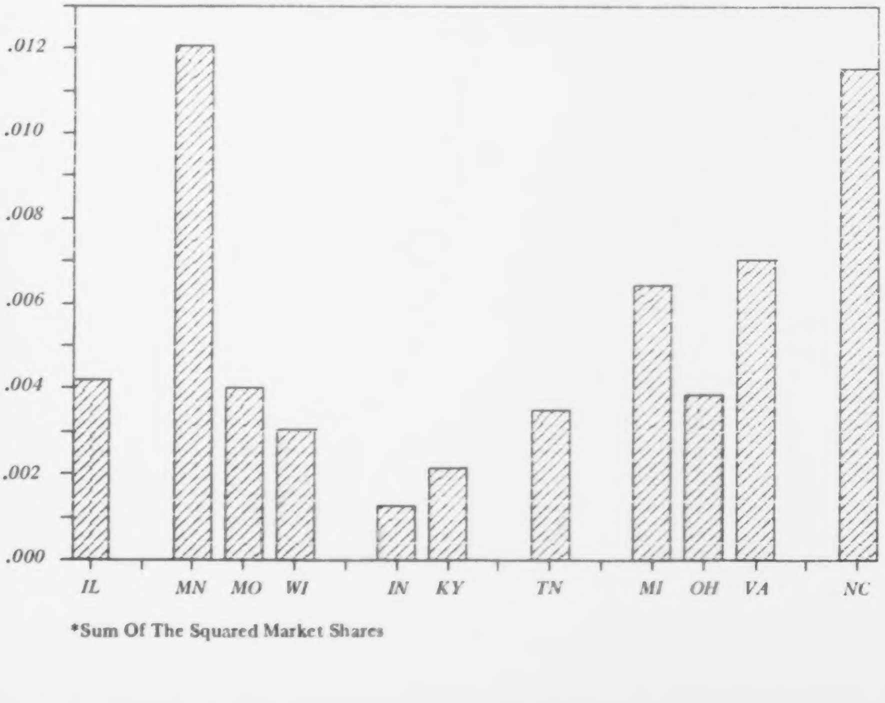
There are six types of different branching regulations in the eleven states in our sample. The branching statutes of Illinois, Minnesota, Missouri, and Wisconsin can best be characterized as severely limited. They all allow multiple offices but the banking functions which can be performed in these facilities are more limited than those which can be performed at a branch. The number and location of these facilities are also severely restricted. These states are often referred to as unit banking states because their statutes formerly did not allow for any facilities detached from the site of the main office.

Kentucky has the next most restrictive branching statutes. Its banks are allowed to branch anywhere in the county in which

Exhibit 1
Concentration of IPC Deposits in Largest Banks
Percent of State Total on 12/31/81



Herfindahl Index* for 12/31/1981 IPC Deposits



*Sum Of The Squared Market Shares

they are located except in cities and towns that house the headquarters of another bank. This type of branching structure is called countywide branching with home office protection. Until 1981 it was also the law in Indiana. Indiana and Tennessee have the next most restrictive branching regulations—countywide branching with no home office protection.

Michigan and Ohio are next on the sequence. They allow branching in the home office county and in all counties touching that county. This is referred to as contiguous county branching. Virginia is the next to least restrictive state in the sample with regard to branching powers. Its banks are allowed to branch statewide via merger, and otherwise into contiguous counties. North Carolina is the most liberal state in our sample with respect to branching powers. Its banks are allowed to branch anywhere in the state without restriction. This type of branching authorization is called statewide branching and is found in many states on the East and West Coasts.

Multibank Holding Company Regulations

There are five types of multibank holding company statutes, three of which are found in our sample. The most restrictive is a complete prohibition of creating any new multibank holding companies. This type currently applies in Indiana and Kentucky and was in effect in Illinois until January 1982. Illinois currently allows multibank holding companies to operate in each of six geographic regions of the state. A corporation can only acquire banks in the region in which it is located under this type of statute. The final type of bank holding company statute observed in the nearby states allows for operating banking affiliates anywhere within the state. This is called statewide multibank holding company authority. Some of the nearby states restrict the maximum share of a state's deposits which a bank holding company can control through acquiring other banks such as has been proposed in Indiana. There are two other types of interstate multibank holding company statutes. One authorizes acquisitions by multibank holding companies from other states only if the state in which the acquiring bank holding company is located reciprocates and allows acquisitions by bank holding companies from the other state. This is referred to as interstate multibank holding company powers with reciprocity. Seven states in the Northeast and the Southeast have passed such a law, and many others are considering it. Currently there are no two states which have agreed to cooperate and allow this interchange. The final type is interstate multibank holding company authority without restriction. Statutes allowing this type of multibank holding company acquisition are currently on the books in Alaska and Maine.

Alternative Means of Defining Banking Markets

A key issue in any discussion of geographic restrictions on where banks may operate full-service offices is, "Do the legal restrictions mirror patterns of commerce?" In defining banking service areas the primary considerations are the residential, work, and commerce patterns. These are governed in large part by physical features, such as rivers and mountains, and by highways and public transportation routes. The laws and regulations, especially with regard to taxation, make up a second major factor that businesses operate under. There are substantial costs for a business to operate sales and manufacturing facilities in more than one state. Thus, it is reasonable to focus the regulation of banks at the state level when income tax and incorporation laws vary from state to state. It is unusual though that such severe restrictions are placed on the interstate operations of depository institutions and not on other types of firms such as manufacturers and public utilities.

The service areas of a financial institution vary with the function being performed. For services which are used frequently—at least once a week—such as check cashing and bill paying, convenience is the predominant factor in determining which institution is chosen. Thus, only those financial institutions which are located near home or work or on the commuting route are favored for these types of transactions. With the advent of automated teller machines and telephone and computer banking, however, convenience may no longer be described in terms of the time it takes to get to a machine and perform those transactions. A banking office can serve a much larger geographical area for services which are used less frequently such as safe deposit boxes, consumer loans, mortgages, and trust services. Thus, the geographic service area of a banking office depends on the topography of the area, transportation patterns, and the frequency with which its services are used.

Traditionally, counties have been the political subdivisions that best circumscribe the residential and work patterns of individuals. However, the last forty years have seen the development of limited access highways and the interstate highway system which facilitate much longer commutes in the same amount of time. It is not unusual now to find people living in one community and driving to a community in another county to work and shop. Many Indiana consumers and business people are no longer able to bank with the same institution in the different communities in which they live and work. There is substantial evidence that Indiana's geographic restrictions on delivering banking services have not taken into account the increased mobility of the state's citizens.

The problem with defining regional boundaries within a state is that some group of people will always live and work in different regions and be inconvenienced. Therefore, a statewide system is most reasonable if the purpose is to help all of Indiana's citizens get convenient access to more sources for banking services in their local communities. A second best alternative, which is preferable to the current system, is to allow expansion into contiguous counties of the head office of each bank. Such a move would leave banks with less restrictive branching powers than federally chartered savings and loans now enjoy. This option appears to be unfair to banks, coming just after savings and loans have been given many of the powers formerly reserved exclusively for banks, such as checking accounts and commercial loans.

Another way to define banking markets is by products. As mentioned earlier, consumers and businesses are willing to consider a larger group of sources for a service if the service is used only infrequently, so convenience is less important. Likewise, individuals and corporations will do business with a non-local bank if the service is not available locally or there are substantial cost savings to going outside the community. A good example of this phenomenon is the number of Hoosiers who transferred their savings into money market mutual funds outside the state when banks and savings and loans were prohibited from offering competitive rates on small deposits. Banks are multiproduct firms, and it is possible to define separate product markets for each of the various types of services they offer.

It is very easy to justify separate product markets for commercial and industrial loans, consumer loans, mortgage loans, small time and savings deposits, large time deposits and nondeposit borrowings, and transaction accounts. Banks' competitors for these various services will vary by product line. For example, personal finance companies and credit unions are the primary, established competition for banks in the consumer loan market while savings and loans and mutual savings banks have been the primary competition in the real estate loan market. The market for commercial and industrial loans is further subdivided by the amount of the loan, with banks from not only Illinois, Michigan, and Ohio calling on large Indiana businesses, but also banks from California, Texas, New York, and North Carolina.

The use of product market definitions greatly complicates the determination of when banking markets are too concentrated or, more specifically, when a few banks control such a vast percentage of the business that they are able to control prices and intimidate new competitors. The federal banking regulators define three firms controlling over 75% of the business as a concentrated banking market. In many communities the percentage of a particular line of business controlled by the largest banks may be quite high. Yet the market for other banking services may be quite competitive even though the number of competitors in the markets for both products is the same. It is difficult to say that a market is too concentrated if just one banking service is dominated by a few banks.

The U.S. Supreme Court in 1963 took a different position concerning bank product markets in the landmark *Philadelphia National Bank* decision. It defined banking as a unique, single line of commerce. The decision argues that consumers and businesses purchase a package of services from a bank and are not likely to hold their savings and transactions accounts in a different institution than the one that lends them money. The single line of commerce depends on the customer relationship hypothesis. It states that individuals and businesses will not split their financial services business up to gain a better price or service but rather will keep their business in only one or a few institutions so as to insure the availability of credit when they need it.

This line of reasoning has been substantially weakened by several changes that have occurred since 1963. First, compensating balances have been replaced by up-front fees as part of loan agreements for reserving future credit availability for large commercial borrowers. Second, demand deposits or checking accounts are no longer the exclusive franchise of banks. The thrift institutions and money market mutual funds have begun offering very similar transaction services which also pay interest. Finally, savings and loans and mutual savings banks now have the power to offer commercial loans and are invading one of the most profitable segments of the banking business—loans to small- and medium-sized companies.

Where does all this leave us in defining banking markets? The accurate definition of banking markets is not trivial if public policy tries to intervene in the financial marketplace and to inhibit concentrated markets from becoming even more so by regulating the allowable activities and actions of banks and bank holding companies. Spatial- or service area-type markets are not useful for comparing multiple markets across different states because each market needs to be defined individually and because spatial markets may vary from product to product depending on the frequency with which the service is used and the importance of convenience. Product markets are intellectually appealing. But, there are substantial data collection problems if one tries to completely enumerate all of the competitors for a service such as consumer loans. This is especially true since many automobile manufacturers began offering below market interest rate loans to assist in selling their products.

For simplicity the following analysis of concentration in the various states uses statewide geographic markets for purposes of interstate comparisons and countywide markets for intrastate comparisons in the state of Indiana. The statewide figures are the only figures that would be comparable over all the states in the sample especially since bank deposit data reported by branch is notoriously inaccurate. For example, some banks allocate deposits to branches by the number of employees or the number of accounts which were opened at a particular branch. Countywide concentration figures are used in the analysis of Indiana markets because counties are the legally defined service areas of Indiana banks.

Concentration in a banking market can be measured by several methods. The simplest to use and understand is the four-firm concentration ratio. It is the percentage of banking resources in a market controlled by the four largest firms. The Herfindahl Index is another method of describing the distribution of resources among competitors in a market. The Herfindahl Index varies between 0 and 1, with 1 being the case of a single firm controlling all the deposits in the market. It is very sensitive to one or two banks which have dominant market shares in a market because it is the sum of the squared market shares. The Herfindahl Index is a very efficient means of summarizing the distribution of market shares and the number of competitions in each market in a single number. A county with a Herfindahl Index of greater than .3 either has one bank which controls at least 50% of the market or two banks which have at least 39% each or three banks with 32% each.

To avoid the problems of constructing an index which weights the relative importance of the concentrations in the various banking product markets and to simplify the enumeration of the number of competitors in each market, this study uses domestic deposits of individuals, partnerships, and corporations (IPC) in measuring the concentration of banking resources in political subdivisions. For purposes of comparison the study also calculated all of the concentration statistics using total assets. The total assets statistics uniformly show higher levels of concentration because the larger banks are the institutions most likely to use nondeposit liabilities to fund a portion of their assets. IPC deposits, therefore, are a conservative measure of the control of banking resources by the largest financial institutions in a geographic market. The concentration ratios and indexes calculated from IPC deposit data will not precisely reflect the market power of the largest financial institutions in all the product markets such as consumer loans, but the indexes do reflect the ability of such institutions to marshal resources to expand their market share in each of these product markets if they choose to do so.

Both the 1983 and 1984 proposed multibank holding company legislation for Indiana used domestic deposits under $100,000 and excluded deposits of governmental units or agencies. It is not possible to calculate the concentration ratios exactly comparable to those specified in the legislation. The annual report of condition data on banks publicly available from the Federal Reserve System does not separate out the deposits over $100,000 for individuals, partnerships, and corporations from total IPC deposits for banks over $100 million. This study uses total domestic IPC deposits for the comparisons presented in Tables 1 through 8.

Comparison of December 1981 Statewide IPC Deposit Statistics

The figures from ten nearby states are included to provide a perspective on the relative ranking of Indiana compared to other states. These states were chosen because of their proximity to Indiana, their relatively similar population size, their comparable mix of agricultural and manufacturing, their comparable urbanization, and their different types of branching and multibank holding company powers. The factors which should influence the amount of deposits in a state's banks are presented in **Table 1**. Notice that the table classifies the states by type of geographic banking restrictions. It is evident that the number of banks declines as branching powers increase. The ratio of the number of people per bank highlights this difference even more. The mean for unit and severely-limited branching states (categories I and II) is 7,186 people per bank with a standard deviation of 1,335, compared to 12,439 (1,255 s.d.) people per bank for the countywide branching states (categories III and IV), and 83,845 for North Carolina, the lone statewide branching state in the sample. A similar relationship can be seen in the deposits per capita figures given in column six of Table 1, though it is not as statistically significant.

Breaking down the number of banks into different size categories reveals that the severely-limited branching states have a significantly higher percentage of their total banks with IPC deposits under $50 million, while countrywide branching states have larger percentages in the $50 to $500 million categories. Also, the contiguous-county and statewide branching states are most noted for their percentages of total banks with deposits over $500 million. The specific figures are shown in **Table 2**. The implications of these results are that increasing the size of the geographic area in which banks may branch increases the number of larger banks in a state.

Table 3 summarizes the concentration of the deposits in the largest banks and the largest counties for each state in the sample. The same concentration was shown graphically in Exhibit 1. The most obvious result is that Indiana is the least concentrated of all the states presented in every category except when Cook County (Chicago) is omitted from the Illinois statistics. The statistics presented in Table 3 consolidate all the affiliate banks in a holding company into a single organization located in the county of the largest bank. The percentage of Indiana's total bank deposits, 16.42%, located in its largest county, Marion County, is half the average of the mean, 32.44%, of the surrounding states even with Illinois excluded. When the eight largest counties are included, Indiana still has substantially less concentration of banking deposits in the major cities than any of the other nearby states except Kentucky. The last column in Table 3 highlights another manifestation of expanded branching powers—namely, all counties except those in contiguous-county and statewide branching states have at least one bank headquartered in each county which is not affiliated with a multibank holding company located in another county.

Table 1

Key Statistics For Sample States

State	*1981 Population In Millions*	*1981 Per Capita Income*	*1977 Manufacturing In Billions*	*1980 Farm Marketing In Billions*	*Percent Urban*	*1981 Deposits Per Capita*	*Deposits In Billions*	*Banks*
I.								
Illinois	11,402	$11,576	40.3	7.9	83.0	$6,600	75.3	1,252
II.								
Minnesota	4,094	10,768	9.6	6.3	66.8	5,458	22.3	759
Missouri	4,941	9,561	13.0	4.1	68.1	5,084	25.1	728
Wisconsin	4,742	10,035	16.6	4.7	64.2	4,307	20.4	636
III.								
Indiana	5,468	9,720	22.7	4.5	64.2	4,525	24.7	405
Kentucky	3,662	8,420	9.5	2.7	50.8	4,252	15.6	343
IV.								
Tennessee	4,612	8,447	12.7	1.7	60.4	3,989	18.4	351
V.								
Michigan	9,204	10,790	37.5	2.7	70.7	4,218	38.8	375
Ohio	10,781	10,313	43.1	3.7	73.3	3,793	40.9	379
Virginia	5,430	10,349	10.9	1.5	66.0	3,742	20.2	223
VI.								
North Carolina	5,953	8,649	18.2	3.6	48.0	2,989	17.8	71

I.—Unit Banking And No Multibank Holding Companies
II.—Unit And Severely Limited Branching With Multibank Holding Companies
III.—Countywide Branching And No Multibank Holding Companies
IV.—Countywide Branching And Multibank Holding Companies
V.—Contiguous-County-Branching And Multibank Holding Companies
VI.—Statewide Branching And Multibank Holding Companies

The largest banking organization in Indiana, as shown in Table 3, has much less control over the total banking resources in the state as measured by IPC deposits than any of the largest banks in the other ten states in our sample. The percentage of the state's total deposits held by the largest bank on December 31, 1981, was 5.90% for Indiana, while the average for the other ten states in the sample was 14.34%. The phenomenon is equally evident when the cumulative market share of the eight largest banks or bank holding companies are compared. The mean of the other ten states is 52.05% while Indiana's is only 23.94%.

Another measure of the market power of banks is the Herfindahl Index. As mentioned above, the Herfindahl Index summarizes the distribution of market shares and the number of competitors in each market. Notice that Minnesota, which has two very large bank holding companies

Table 2

Distribution of Independent Banking Organization By Size of IPC Deposits (in Millions)

	Percent Less Than 25	*Percent 25-100*	*Percent 100-500*	*Percent More Than 500*	*Total Number*
I.					
Illinois	56	36	8	0.5	1.247
Without Cook County	64	32	4	0.0	1.007
II.					
Minnesota	83	15	1	0.5	622
Missouri	72	23	3	2.0	481
Wisconsin	63	33	3	1.0	485
III.					
Indiana	40	47	13	1.0	404
Kentucky	50	44	6	1.0	342
IV.					
Tennessee	55	37	6	2.0	307
V.					
Michigan	36	52	10	6.0	216
Ohio	50	34	11	5.0	296
Virginia	50	42	3	5.0	170
VI.					
North Carolina	35	44	11	10.0	71

which control almost half the state's deposits, has the largest Herfindahl Index, .1205, even larger than North Carolina, .1153, which has the largest four and eight bank concentration ratios. Thus, the Herfindahl Index is very effective at identifying markets with one, two, or three dominant banking organizations. The Herfindahl Index is concerned with more than just the market shares of the top four banks, however. Tennessee has one- and four-bank percentages of 10.80 and 33.34 while Ohio's respective percentages are lower at 9.07 and 31.11, yet Ohio has the larger Herfindahl Index, .0386 versus .0349 for Tennessee. Indiana's Herfindahl Index of .0127 is once again significantly lower than any of the other states in the sample.

Changes in Statewide Market Structure, 1961 to 1981

There are two trends evident in the changes in the numbers of banks for the period 1961 to 1981 reported in **Table 4**. First, in

Table 3

Statewide Concentration of Banking Resources

State	*Percent of Largest Bank or Bank-holding Company*	*Top 4 Banks*	*Top 8 Banks*	*Herfindahl*	*Largest County*	*Top 4 Counties*	*Top 8 Counties*	*Percent of Counties with Local Institutions*
I.								
Illinois	14.88	35.04	38.70	.0422	61.75	68.60	73.92	100%
Without Cook County	1.44	3.93	6.80	.0024	8.16	21.84	34.83	100%
II.								
Minnesota	26.05	52.85	56.44	.1205	30.90	66.18	70.26	100%
Missouri	10.62	34.44	49.27	.0402	33.36	70.21	75.42	100%
Wisconsin	12.64	29.39	36.55	.0302	33.95	46.30	58.15	100%
III.								
Indiana	5.90	17.34	23.94	.0127	16.42	34.57	45.73	100%
Kentucky	9.77	24.57	30.90	.0216	25.85	38.57	46.66	100%
IV.								
Tennessee	10.80	33.34	45.56	.0349	24.24	55.68	62.21	100%
V.								
Michigan	15.67	46.65	61.99	.0647	49.04	71.00	79.69	86%
Ohio	9.07	31.11	50.07	.0386	29.07	64.17	74.42	93%
Virginia	13.59	43.53	71.48	.0708	31.37	67.35	80.53	69%
VI.								
North Carolina	20.31	61.60	79.57	.1153	34.16	70.82	86.13	39%

***December 1981 IPC Deposits**

Table 4

Changes in Number of Banks 1961–1981

	1961	*1971*	*1981*	*Percent Change: '61–'71*	*Percent Change: 71–'81*
I.					
Illinois	970	1131	1251	16.6	10.6
II.					
Minnesota	680	728	759	7.1	4.3
Missouri	458	494	728	7.9	47.4
Wisconsin	562	607	636	8.0	4.8
III.					
Indiana	437	405	405	–7.3	0.0
Kentucky	342	343	339	0.3	–1.2
IV.					
Tennessee	290	307	351	5.9	14.3
V.					
Michigan	371	329	375	–11.3	14.0
Ohio	575	512	379	–11.0	–26.0
Virginia	302	245	223	–18.9	–9.0
VI.					
North Carolina	170	94	71	–44.7	–24.5

the severely-limited branching states there have been substantial increases in the numbers of banks. The increases in the number of banks reflect the fact that new banks were the only method of providing banking offices to many new suburbs and shopping centers that were developed. Multibank holding companies have been a major factor in encouraging the proliferation of new banks. This multibank holding company growth is not limited to the severely-limited branching states. The increase in the number of banks in Michigan and Tennessee also reflects this trend. But the explanation here is the ability of a multibank holding company to enter a new market by establishing a new, de novo bank. This use of the multibank holding company as a vehicle for entering new banking markets is particularly evident when the number of banks in 1981 in Table 4 is compared with the number of independent banking organizations on the same data which are listed on Table 2. For example, in Table 4 the number of banks in Michigan grew from 329 to 375 between 1971 and 1981. However, at the end of 1981 there were only 216 independent banking organizations in Michigan, which suggests that the number of new, independent, unaffiliated banks chartered in the last decade has been substantially less than the number of existing banks which have chosen to affiliate with multibank holding companies.

The second trend is the decline in the number of banks in contiguous-county branching and statewide branching states. In this instance bank mergers have been used as the vehicle to extend the geographic coverage of banks. When coupled with multibank holding company powers, it leads to a significant contraction in the number of independent banking organizations, as a comparison of the 1961 figures for groups V and VI with the 1981 holding company figures found in Table 2 will attest. For example, the number of independent banking organizations in Virginia was 170 at the end of 1981 while the number of banks in 1981 was 223 as compared to 302 in 1961. However, as the note at the bottom of **Table 6** points out, the lack of reliable holding company affiliation data prevents exact comparisons of the number of independent banking organizations over time except for states like Indiana and Kentucky where they have long been prohibited.

The implications of these figures for Indiana is that there will likely be a reduction in the number of banks if the proposed multibank holding company bill becomes law because of its restrictions against a multibank holding company acquiring any banks less than five years old. A law allowing contiguous-county branching like the one recommended by the 1967 Indiana University bank study commission would probably result in a larger decrease in the number of banks but a smaller decrease in the number of independent banking organizations if Indiana should follow the patterns observed in Tennessee, Michigan, Ohio, and Virginia over the last two decades.

Table 5 shows that higher levels of deposits per capita observed in the severely-limited branching states as contrasted with the contiguous-county branching and statewide branching states is not due to differences in the growth of per capita IPC deposits over the last two decades. The difference in per capita deposits may vary inversely with expanded branching powers but there appear to be other more significant factors at work which have not changed substantially over the preceeding twenty years.

Table 6 charts the changes in the percentage of IPC bank deposits controlled by the largest three banks in a state. In 1961 the three largest banks in Indiana, Wisconsin, Kentucky, and Ohio controlled similar shares of their states' IPC deposits, 21.5%, 22.0%, 22.7%, and 23.6% respectively. At the end of 1981 their figures for banks alone were 15.4% for Indiana, 12.3% for Wisconsin, 21.3% for Kentucky, and 21.4% for Ohio. When the effects of multibank holding company acquisitions are factored in as shown in the last column on the right, only Indiana exhibits a consistent and substantial decline in control of bank deposits by the top three banks over both decades. Wisconsin, Missouri, and Tennessee also have lower bank three-bank concentration ratios in 1981,

Table 5

Growth In Per Capita IPC Deposit at Banks (Using Census Data From Previous Year)

	Percent Change: '61-'71	*Percent Change: 71-'81*	*1981 Per Capita*
I.			
Illinois	89	127	$6591
II.			
Minnesota	113	144	5481
Missouri	96	226	5108
Wisconsin	91	108	4340
III.			
Indiana	117	130	4507
Kentucky	131	171	4253
IV.			
Tennessee	131	128	4007
V.			
Michigan	109	96	4193
Ohio	82	97	3787
Virginia	134	120	3801
VI.			
North Carolina	152	129	3029

Table 6

Changes In Control of Bank Deposits 1961–1931

	Percent Held by Top 3 Banks			Percent Held by Top 3 Holding Companies		
	1961	*1971*	*1981*	*Percent Change: '61–'71*	*Percent Change: '71–'81*	*1981*
I.						
Illinois	34.6	29.6	31.6	–5.0	2.0	31.6
II.						
Minnesota	27.7	24.5	23.2	–3.2*	–1.3*	51.1
Missouri	29.6	22.2	14.0	–7.4*	–8.2*	28.8
Wisconsin	22.0	14.3	12.3	–7.7*	–2.0*	26.8
III.						
Indiana	21.5	20.1	15.4	–1.4	–4.7	15.4
Kentucky	22.7	21.1	21.3	–1.6	0.2	21.4
IV.						
Tennessee	25.7	25.4	16.7	–0.3*	–8.7*	26.1
V.						
Michigan	39.2	34.7	29.0	–4.5*	–5.7*	38.1
Ohio	23.6	19.5	21.4	–4.1*	1.9*	24.8
Virginia	17.0	25.4	33.6	8.4*	8.2*	34.8
VI.						
North Carolina	43.6	48.8	52.4	5.2	4.6	52.4

*Change in concentration of (IPC) bank deposits may be substantially underestimated due to expansion of multibank holding companies in this state. See column 6 for 1981 top 3 bank holding company figures. Accurate lists of banking holding company affiliates were not available for 1961 and 1971.

but they have significantly higher top three holding company percentages of statewide deposits. Wisconsin's top three banking organization percentage rises from 12.3% to 26.8% when the affiliates of a multibank holding company are consolidated into a single institution. Similarly, Missouri's percentage rises from 14.0% to 28.8%, and Tennessee's percentage rises from 16.7% to 26.1%. The figures in Table 6 suggest that multibank holding company affiliations and expanded branching powers have helped the three largest banks in other states maintain their control of between one-fifth and one-third of their state's deposits over time.

The percentage decline in the fraction of the state's total deposits controlled by Indiana's three largest banks over the twenty-year period is over 28%. However, the results of Table 5 show that Indiana as a state had average to above average growth in per capita deposits during the same period. The implications of these facts is that Indiana's restrictive regulations concerning geographic expansion have hurt the bigger banks vis-a-vis the smaller banks in the state, but they have not dramatically cut the rate of bank deposit growth for the state as a whole.

Concentration of Deposits in Indiana Counties—A Cross Industry Comparison

There are five different types of financial institutions in Indiana which offer deposit-like services. They are commercial banks, savings and loan associations, mutual savings banks, credit unions, and investment loan companies. In addition to taking consumers' savings, each of these institutions makes consumer loans. The primary local competitors of commercial banks are other commercial banks and the other financial institutions listed above. Commercial banks are the dominant type of financial institution in Indiana, controlling 68.7% of the state's $36.035 billion in IPC deposits at the end of 1981. Savings and loans are the next most significant type of financial institution with 137 institutions controlling 25.3% of the state's deposits. Credit unions are the third major type of institution, controlling 4.5% of the state's deposits. The final two types of institutions, mutual savings banks and investment loan or Morris Plan companies, each control less than 1% of the state's deposits.

Table 7 shows the size distribution of the various types of financial institutions. The typical Indiana bank is small with IPC deposits less than $50 million. In fact 40% of the banks had IPC deposits under $25 million. These institutions are fast threatened with becoming uneconomical to operate as full-service institutions in this era of volatile interest rates, electronic banking, and constant changes in banking regulations coming out of Washington, D.C.

Another striking fact about the size distribution of banks is that there are no banks with IPC deposits between $500 million and $1 billion. It appears that the restrictions against branching across county lines have effectively limited the size of banks located outside Marion County. Multibank holding company authority or expanded branching powers would give the 13% of the state's banks with assets between $100 and $500 million the opportunity to expand even if they are in a mature market. Thus, it is highly likely that the increase in statewide bank concentration that will occur if either of these proposals is approved would be accompanied by an increase in competition at the statewide level. The key ingredient to this increased competition is the creation of several more large institutions whose size allows them to offer services that Indiana banks and businesses are currently obtaining from Indianapolis and Chicago banks.

The size distribution of savings and loan associations and mutual savings banks is not much different from that of commercial banks in cumulative percentage

Table 7

Distribution of Financial Institutions
By IPC Deposit Size (in Millions)

	Bank	*Savings & Loan*	*Mutual Savings Bank*	*Investment Loan Company*	*Credit Union*
0–10	40	18	0	2	464
10–25	122	23	0	1	15
25–50	118	37	1	1	11
50–100	71	25	3	0	4
100–250	39	24	0	1	0
250–500	12	6	0	0	0
500–1000	0	0	0	0	0
1000–2500	3	0	0	0	0
2500–5000	0	0	0	0	0
5000–99,999	0	0	0	0	0
Total	405	137	4	5	494
Total IPC Deposits In Millions	24,744	9,132	270	257	1,632
Percent of State Total	68.7	25.3	0.8	0.7	4.5

terms except for the fact that there are no institutions with IPC deposits over $400 million dollars. These thrift institutions have the possibility of becoming specialized mortgage banking or consumer financial centers in the future, so the small size of most of these institutions is not as critical as it is in the case of commercial banks. Credit unions are the most numerous financial institution in the state. There is also a preponderance of very small credit unions. The small deposit base and the volunteer labor force that many of them depend on will condemn a vast majority of them to be very limited-service institutions.

Table 8

Percent of Counties With XX Number of Institutions

Number of Institutions	*Banks*	*Banks, S&Ls, MSBs, and Investment Loan Companies*	*Banks, S&Ls, and Credit Unions*
1	4.3	2.2	2.2
2	7.6	6.5	3.3
3	25.0	12.0	7.6
4	25.0	13.0	10.9
5	17.4	16.3	9.8
6–10	19.6	42.4	40.2
10–25	1.1	6.5	16.3
Over 25	0	1.1	9.8

If the banks and savings and loan associations aggressively seek the consumer's business with competitive rates on loans and savings and direct deposit of payroll checks, the competitive advantages of volunteer labor, more attractive rates, and payroll deductions that the credit unions have enjoyed may be neutralized by the economies of scale and electronic funds transfer technology that banks and savings and loan associations are beginning to exploit.

Given the growing similarity in the assets in which financial institutions can invest and the liabilities (deposits) which they can offer, the non-bank depository institutions cannot be excluded from any analysis of local banking market structure. Focusing on just banks, over one-third of Indiana's ninety-two counties have three or fewer banks (see **Tables 8** and **9**.) These counties, almost all relatively small markets in terms of total IPC deposits per county, are by definition very highly concentrated. When savings and loan associations and mutual savings banks and investment loan companies are introduced as competitors, the number of counties with three or fewer financial institutions falls to one out of five. Using the federal regulatory agencies' standard of three institutions controlling 75% or more of the IPC deposits as the test for a highly concentrated market, 82.6% of Indiana's counties qualify as highly concentrated when using only bank data. This figure drops to 56.5% when savings and loan associations, mutual savings banks, and investment loan companies are included in the market.

The Herfindahl Index is used as another method of showing that distribution of banking resources among competitors. Fifty-two of Indiana's ninety-two counties have Herfindahl Indexes for bank IPC deposits over .3 (see **Table 10**.) The addition of all bank-like financial institutions except credit unions lowers the number of counties to thirty-three that are very highly concentrated using the Herfindahl Index definition of greater than .3. The U.S. Department of Justice's 1982 guidelines concerning bank mergers and acquisitions define any market with a Herfindahl Index

Table 9

Percent of Counties With Bank Concentrations Ratios
Greater Than XX Percent (IPC Deposits)

	3 Largest Institutions–IPC Deposits			**5 Largest Institutions–IPC Deposits**		
XX Percent	*Banks*	*Banks, S&Ls, MSBs and Investment Loan Companies*	*Banks, S&Ls, and Credit Unions*	*Banks*	*Banks and S&Ls*	*Banks, S&Ls, and Credit Unions*
75	82.6	56.5	54.3	98.9	97.8	95.6
90	54.3	29.3	27.1	90.2	76.0	70.6
95	40.2	22.8	22.8	85.8	63.0	53.2

Table 10

Percent of Counties With Herfindahl Indexes (IPC Deposits)

	Banks	*Banks, S&Ls and MSBs*	*Banks, S&Ls, and Credit Unions*
Less than .1	0.0	1.1	1.1
.1–.2	7.6	18.5	23.9
.2–.3	35.9	44.6	41.3
.3–.4	30.4	20.7	20.7
.4–.6	20.7	9.8	7.6
Over .6	5.4	5.4	5.4
Statewide Herfindahl Indexes			
IPC Deposits	.0127	.0078	.0071
Total Assets	.0182	.0113	.0105

of over .1 as moderately concentrated and markets with Herfindahl Indexes over .18 as highly concentrated. Note, no Indiana counties are unconcentrated, that is, with an HI less than .1, and only seven counties are moderately concentrated. Thus, while Indiana is very unconcentrated with respect to statewide concentration of IPC deposits at banks, 92% of its counties are highly concentrated.

Table 11 shows the individual market shares of Indiana's eight largest banks and the cumulative market share for banks, banks with savings and loans associations, mutual savings banks, and investment loan companies added; and all the financial depository-type financial institutions including credit unions. The dominant positions of the three large Indianapolis banks relative to the next five largest institutions is readily visible. The effect is even more pronounced if total assets, shown on the right side of the chart, are used. **Table 12** shows that the thrift institutions tend to have more of their deposits concentrated in institutions in the eight largest metropolitan counties. This suggests that allowing cross-industry mergers may facilitate increased competition with a slight increase in deposits concentrated in the major metropolitan areas outside Marion County.

Table 11

Share of Indiana Statewide Market Held By Largest Institutions

	Total IPC Deposits, December 1981				*Total Assets, December 1981*			
	Banks	*Banks, Cumulative*	*Banks, S&Ls, Inv. Loan Cos., and MSBs*	*Previous Column + Credit Unions*	*Banks*	*Banks, Cumulative*	*Banks, S&Ls, Inv. Loan Cos. and MSBs*	*Previous Column + Credit Unions*
Largest	5.90	5.90	4.24	4.05	7.60	7.60	5.73	5.51
2nd	5.48	11.38	8.19	7.92	7.33	14.93	11.26	10.83
3rd	4.04	15.43	11.10	10.59	4.96	19.88	14.99	14.43
4th	1.91	17.34	12.47	11.90	2.10	21.99	16.58	15.95
5th	1.82	19.15	13.78	13.15	1.80	23.79	17.94	17.26
6th	1.63	20.79	14.95	14.27	1.71	25.50	19.22	18.50
7th	1.63	22.42	16.12	15.39	1.69	27.19	20.50	19.72
8th	1.53	23.94	17.25	16.46	1.60	28.79	21.71	20.89

Table 12

County Share of Totals

County	*Banks*	*Banks, Cumulative*	*Banks and S&Ls*	*Banks and S&Ls, Cumulative*	*Banks, S&Ls, MSBs, Inv. Loan Cos., and Credit Unions*	*Banks, S&Ls, MSBs, Inv. Loan Cos., and Credit Unions, Cumulative*
Largest	16.42	16.42	16.32	16.31	16.34	16.34
2nd	6.55	22.96	8.22	24.52	8.65	24.99
3rd	6.53	29.49	6.03	30.55	6.31	31.30
4th	5.08	34.57	5.02	35.57	5.08	36.38
8th	1.99	45.73	2.28	47.66	2.29	48.54

Conclusions

Compared to ten nearby states with similar populations and with manufacturing and agricultural emphasis, Indiana has a substantially smaller amount of its deposits made by individuals, partnerships, and corporations on a statewide basis under the control of its largest banks. The concentration of deposits in the top three banks has fallen by over 28% in the last two decades which explains why Indiana is so atypical relative to other Midwestern states. However, during the same period of time, Indiana has enjoyed a level of growth of per capita bank deposits similar to the median of the other states in the sample. The size distribution of Indiana's banks is notable for the large percentage of banks in the $100 to $500 million of IPC deposits range and a paucity of banks with deposits over $500 million. The reduced growth of the largest banks and the lack of a second tier of sizable banks can be attributed in large part to slow population growth of the counties containing Indiana's largest cities and to the legal constraints preventing the larger banks from expanding their service areas by branching into neighboring counties.

With expanded asset and liability powers, Indiana's savings and loan associations, mutual savings banks, investment loan companies, and larger credit unions should be considered active competitors to commercial banks, especially in the area of consumer financial services. Adding these other financial institutions reduces the number of counties with four or fewer major financial institutions from 57 to 31 or approximately one-third of Indiana's 92 counties. The inclusion of all non-bank financial institutions drops the percentage of counties with three institutions controlling over 90% of the deposits from 50 to 25 counties.

Therefore, these nonbank financial institutions have the potential for substantially reducing the concentration of bank deposits if cross-industry mergers and acquisitions by institutions from outside the local counties are allowed. If this opportunity is not undertaken soon, it may be too late to prevent a high level of implicit cooperation and consolidation among banks and thrift institutions tied into the three major automated teller networks that are spreading across the state. Already the MoneyMover network has savings and loans, a mutual savings bank, and credit unions affiliated with it. In 1960, two Indianapolis banks were among the top 64 in the country. Today, none are. ☐

1968 Recommendations for Banking Changes

The 1968 Edwards and Fischer report, "Banking Structure in Indiana," supported the spirit of the 1932 Study Commission report which had created a banking structure of

"a. Widespread local ownership

b. Absences of excessive, ruinous competition

c. Broad coverage of the state in terms of availability of banking service."

Then Edwards and Fischer recommended, "In order to maintain local ownership of Indiana banks and to encourage evolutionary rather than drastic change in banking structure, the authorization to branch beyond county lines should be limited arbitrarily but with no uncertainty to one of the following areas:

a. The area within a fifty-mile radius of the location of the bank's home office as of the date the law is passed

b. The county in which the home office is located plus all immediately adjacent counties

c. The county in which the home office is located plus one immediately adjacent county plus all counties immediately adjacent to that county."

Works referred to:

"Report of the Study Commission for Indiana Financial Institutions" (Indianapolis: 1932).

Edward E. Edwards and Gerald C. Fischer, "Banking Structure in Indiana" (Bloomington: Foundation for Economic and Business Studies, 1968.)

Branching Regulation and the Small Business Loan Market

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In an environment in which "deregulation" has become the popular alternative to regulatory involvement, the system of banking laws and regulations which governs our financial system has come under close examination. The result has been major changes in national regulation, with many corresponding changes in state laws. The thrust of these regulatory changes has been to impose more competitive pressure on the institutions which make up the financial system, in the hope of improving the performance of these institutions on behalf of their customers.

One major aspect of the historical regulatory structure of financial markets which has received much attention is that of the various state branching laws. Based on the assumption that a larger number of institutions implies more competition, many states have changed, or are considering a change in, their branch banking laws. The general direction has been a move away from unit or limited branching regulations toward some sort of statewide branching. Such changes would increase the number of competitors and permit financial institutions to take advantage of scale economies.

Permitting statewide branching (and ultimately interstate branching) is a logical step to take if one accepts the proposition that any restriction (such as unit branching or limited geographical branching) is likely to reduce entry into a market or prevent the capture of scale economies. The gains to be made clearly depend on how much impact historical regulation has actually had on the degree of competition or on the exploitation of scale economies.

Evidence regarding the potential gains from deregulation of the branching laws is mixed. This is not surprising if one considers the nature of the market for financial services. For most consumers and firms, the market is very local. Small firms and consumers minimize transactions costs by shopping for financial services in a very restricted geographic market. Customer information is also more cheaply collected and maintained in local markets. Except for very small markets ("one-bank towns"), one might expect that there would be a fair amount of competition for customers in any local financial market, regardless of the nature of the branch banking laws. In any market, there is always the threat of entry if profits of financial intermediaries become too attractive, and there is a growing national market for some types of financial services (for example, credit cards and sophisticated deposit accounts). If this is the case, then the potential gains from regulatory change are not substantial.

If markets are already reasonably well-served (with little gain to be exploited by a new entrant), then changes in branch banking laws, especially those that simply permit statewide holding companies, may not increase the number of competitors but rather reduce the number of independent banks on a statewide basis as profitable local institutions are acquired by larger firms. As larger financial institutions purchase smaller institutions, the number of legal banking entities declines while the number of competing entities changes little if at all. This may limit the gains accruing to customers from any economies of scale if the degree of local market competition does not change.

Whatever the total gain from improved competition, it could be passed on to the ultimate customer in many forms. The most obvious form of benefit would be a reduction in the interest rate charged on loans (and/or an increase in the rate paid on savings). The benefits might also be passed on in the form of increased credit availability (a likely result of increased competition), loan terms, or better bank services. In fact, if the total gain is not large, and the gains are passed on to customers in a variety of ways, it may be empirically difficult, if not impossible, to detect the resulting improvement (if any) in the financial markets from changes in the branching laws.

This article attempts to identify the potential gains from deregulation by examining the performance of financial markets under a variety of regulatory structures as assessed by the small business sector of the customer market. In this study, each firm is asked to provide information about its most recent loan, about the financial market in which it operates, and about its satisfaction with numerous dimensions of bank service. Since each firm describes and thus defines the scope of its market, no arbitrary geographic definition of market size is required. And, loan transaction data are unique to the firm, not averages of bank portfolio statistics.

The data used in this analysis consist of interviews with 709 firms in the states of Illinois, Indiana, Kentucky, Michigan, Minnesota, Missouri, North Carolina, Ohio, Tennessee, Virginia, and Wisconsin taken in April of 1982. The then-current branch banking restrictions are summarized in **Table 1**. In comparing the various percentages presented below, a sampling error of about five percentage points should be applied to the figures.[1]

Measuring performance is a complex problem. In the economist's simple model, one need look only at price and quantity. In reality, banks (and lenders in general) have many margins on which adjustments can be made in response to competitive pressure. Certainly, the size of the loan and the interest rate charged are important measures of performance. However, banks provide other services to their customers that can be adjusted, along with other loan terms such as the use of collateral, compensating balances, and the maturity of the loan. With rising cost curves on all margins, adjustments will be spread over the full range of terms and services, making it more difficult to observe bank adjustments to changes in the competitive environment. In recognition of this fact, the discussion will focus on differences in the performance

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[1] The five percentage point standard error represents a two-tail 95% confidence interval.

Table 1
State Banking Laws Classifications[1]

		Branching Law		
		Unit	*Limited*	*Statewide*
Holding Companies Permitted	*Yes*	Minnesota Missouri (136, 19.2%)	Ohio, Michigan, Wisconsin Tennessee, Kentucky (355, 50.1%)	North Carolina Virginia (88, 12.4%)
	No	Illinois (64, 9.0%)	Indiana (66, 9.3%)	

1. Numbers in parentheses indicate number of observations and percent of total observations.

measures based on traditional tests of significance and also on the consistency of the direction of change (or differences) in the magnitudes of the performance measures (a sign test), and will rely on direct measures of terms as well as qualitative assessments of market performance.[2]

Interest Rates and Loan Sizes

It is assumed that the samples of firms in each state have identical risk distributions, that there is no difference in the average riskiness of firms across states. Two basic regulatory classifications, shown in Table 1, are used. Firms are classified as being in states that have unit, limited, or statewide branching laws at the time of the survey. The second classification groups the firms by holding company status—those that permit statewide holding companies and those with more restrictive holding company regulations. Loans analyzed were made between 1978 and 1982.

If deregulation (meaning statewide branching) produces more competition in a market, then one would expect on average larger loans and lower interest rates on those loans in deregulated markets compared to regulated markets (unit or limited branching). Controlling for maturity, those states which allow limited branching have the largest average loan size (Table 2). Small subgroup sample sizes coupled with the possibility of a few large loans in certain categories produce mean estimates with high variances. The results, however, are consistent across maturity classifications. In addition, those states which do not allow bank holding companies have larger average loan sizes than those states which allow holding companies, except for loans with long maturities. As expected, the size of the average loan increases as the maturity of the loan lengthens for all regulatory classifications.

As maturities increase, the interest rate paid on loans decreases. While the distributions are somewhat different, the data indicate that in each maturity class, firms in unit branching states paid the lowest rates while those in statewide branching states paid the highest interest rates (**Table 3**). Many more loans were linked to the prime rate in statewide branching states. Firms operating in states which did not allow holding companies paid lower rates than those in states which allowed holding companies.

Other Loan Terms

Terms other than the interest rates are important to both lender and borrower. These include the maturity of the loan, collateral requirements, and the periodicity of payments. Adjustments in these terms can affect the true return and the risk taken on any given loan. Also, borrowers have needs which may be better fit by alterations in these terms. Terms should be more "liberal"—more favorable to the borrower (given the borrower's needs) in states where competition is more intense.

The maturity distribution of loans made was much shorter in states with

Table 2
Average Loan Size[1]

	Holding Companies		*Branching Type*		
Maturity	*Yes*	*No*	*Unit*	*Limited*	*Statewide*
Under 12 months	$44	$77	$46	$54	$51
	(100)	(324)	(107)	(204)	(128)
	[245]	[65]	[100]	[183]	[27]
13-60 months	$49	$135	$39	$70	$50
	(101)	(453)	(67)	(221)	(123)
	[147]	[19]	[40]	[96]	[30]
61 or more months	$232	$208	$189	$241	$235
	(464)	(295)	(289)	(500)	(344)
	[80]	[21]	[26]	[62]	[13]

1. Average loan size is in thousands of dollars. Numbers in parentheses are standard deviations. Numbers in brackets are sample size.

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[2] Given ten measures of performance, if there are no differences in the true population statistics, observed differences will be a result only of sampling variation. Differences between control group and test group statistics would be randomly positive or negative. If the number of positive or negative differences is significantly different from that expected from chance, the result may support the presence or absence of the expected effects of deregulation.

Table 3

Interest Rate Paid (Percentage Distribution)

	Interest Rate									
Maturity	*No Answer*	*9 or Less*	*10-12*	*13-15*	*16-18*	*19+*	*Prime +1*	*Prime +2*	*Prime +3*	*Floating*
Under 13 months:										
Unit	5%	5%	4%	4%	64%	5%	10%	2%	1%	–
Limited	3%	6%	6%	8%	43%	8%	15%	10%	1%	–
Statewide	4%	11%	11%	7%	30%	4%	22%	7%	4%	–
13-60 months:										
Unit	8%	3%	10%	12%	50%	5%	10%	2%	–	–
Limited	3%	6%	9%	10%	29%	10%	18%	13%	–	2%
Statewide	0%	7%	17%	20%	33%	–	23%	–	–	–
61 or more months:										
Unit	8%	23%	27%	8%	15%	8%	11%	–	–	–
Limited	0%	16%	26%	18%	11%	–	14%	10%	3%	2%
Statewide	0%	15%	8%	–	15%	8%	23%	23%	–	8%
Under 13 months:										
Holding	4%	7%	6%	7%	44%	8%	14%	9%	1%	–
No Holding	2%	1%	6%	5%	66%	3%	12%	3%	2%	–
13-60 months:										
Holding	3%	5%	11%	13%	34%	8%	17%	8%	–	1%
No Holding	5%	5%	11%	11%	42%	5%	16%	5%	–	–
61 or more months:										
Holding	0%	18%	24%	11%	15%	3%	14%	11%	2%	2%
No Holding	9%	19%	24%	19%	5%	5%	19%	–	–	–

prohibitions against statewide holding companies (**Table 4**). This resulted from a very short maturity distribution for firms in unit banking states.

The highest proportion of short-term loans (12 months or less) occurred in the unit branching states. If firms wanted short-term loans, then the interpretation is that they were least able to get them under statewide branching regulations. In general, during this period, borrowers seemed to prefer shorter maturities, shying away from long-term commitments and borrowing short-term survival money.

Loans with regular installments were much more frequent under statewide branching (and holding company) regulations (**Table 5**). Cash-poor firms would probably prefer balloon payments. Installment payments are less favorable to the borrower and more favorable to the bank, which can recover its capital sooner, running less risk of losing the capital.

Substantial differences in collateral requirements by regulatory structure were found. Other things equal, the taking of collateral is in the interest of the lender, as it represents the prepayment of part or all of the loan given monitoring and liquidation costs. The less the degree of competition, the more likely the use of collateral, reducing the risk to the lender and imposing costs on the borrower.

Business collateral was taken most frequently for loans made where statewide holding companies were permitted (**Table 6**). The reverse was true for personal collateral. By branching status, business collateral was taken most frequently in unit states, but personal collateral was least often taken. Overall, collateral of some type was required most frequently in unit branching states and where statewide holding companies were permitted.

Compensating balances were required on about 7% of the loans reported. Overall, there were neither systematic or large differences by regulatory structure.

Satisfaction with Bank Services

Banks provide their customers with a host of services in addition to loans. These services may or may not have an explicit charge associated with them, but they are expensive to produce and of value to the customer firm. The firms surveyed were asked to rank ten different bank characteristics according to their importance in the banking relationship. Four possible responses were allowed: very important, important, not very important, and not important. A second question asked respondents to rate the performance of their major bank on these same characteristics. Once again four possible responses were allowed: good, better than average, below average, and not good. The questions ranged from purely economic issues like "cheapness of money" to purely service-related issues like "provides helpful business suggestions" and "comes to you with ideas for improving bank services to your firm."

A priori, there should be no difference across regulatory structures in the firms' assessments of the importance of the ten items in their banking relationship (except to the extent that responses may be biased because of the conspicuous absence or presence of one or more of the characteristics in a particular state). Differences in

Table 4

Loan Maturity

	Maturity[1]		
	1-12 months	*13-60 months*	*Over 60 months*
Holding companies:			
Yes	52%	31%	15%
No	62%	18%	18%
Branching laws:			
Unit	60%	24%	14%
Limited	54%	29%	10%
Statewide	39%	43%	13%
All types:	*54%*	*29%*	*17%*

1. Excludes open-end lines of credit.

Table 5
Repayment Method

	Regular installment	*One payment*	*Balloon payment*
Holding companies:			
Yes	51%	33%	15%
No	40%	46%	12%
Branching laws:			
Unit	44%	42%	12%
Limited	48%	34%	16%
Statewide	64%	27%	8%
All types:	*49%*	*35%*	*14%*

ratings on how well banks deliver on the specified characteristics should provide an indication of the resources which banks devote to the lending process and their overall relationship with customers. If there are no explicit fees for these services, all else equal, then loan interest rates should be higher. Alternatively, for a given rate of interest, for example, the more competitive markets should provide more services, thus producing better ratings of performance by the respondents.

As expected, there were no significant differences in the rankings of desired characteristics across the types of regulatory structures. However, the importance of each characteristic does vary. The top five characteristics in order of importance were "knows you and your business," "reliable source of credit," "offers the 'cheapest money' available," "easy access to loan officers," and "offers a wide range of banking services." Interestingly, the cheapness of money is not the most highly ranked characteristic, indicating that firms look to their major bank to help them in running their business and not solely as a source of credit. This may be due to a recognition that the cost of money is fairly uniform, and so firms rate other features of banking services as being more important to them.

Table 7 indicates only slight differences in ratings of performance across regulatory structure. It is not clear that these differences are significant enough to claim that one type of regulatory structure is vastly superior to another. The top six performance ratings were given to "convenient location," "reliable source of credit," "easy access to loan officer," "offers a wide range of banking services," "knows you and your business," and "one person always handles your credit needs." In times of tight money and when banks were cutting back on services, one would expect that "offers the 'cheapest money' available," "provides helpful business suggestions," "knows you and your industry," and "comes to you with ideas for improving bank services to your firm" would not be highly rated, and this was in fact borne out by the evidence. The fact that "convenient location" received the best rating is not particularly surprising. This is an indication that regardless of regulatory structure, firms felt that there was not a paucity of banks in local areas to serve their needs.

Using these data, there are several approaches to assessing bank performance. Using all ten characteristics, the number of "good" ratings could be constructed for each firm and analyzed by regulatory structure. Systematic differences in the mean values of this index would indicate relative differences in bank performance across regulatory structures.

However, not all the characteristics identified may be important to the banking relationship. Furthermore, some characteristics may be important to some firms and not to others. In a competitive market, firms should tailor their outputs to satisfy customer demand. As a measure of performance based on what customers want, an index based only on characteristics rated as important to the banking relationship was constructed. Firms were assigned a value of one for each characteristic rated as "important" where the bank's performance was also rated as "good." For example, if respondents indicated that "easy access to loan officer" was considered a "very important" characteristic and gave a rating of "good" for the performance of their major bank, then the index was increased by one. This was done for all the ten characteristics. The maximum potential score on this index is ten (all ten characteristics are rated as important and the bank received a top rating on all characteristics).

The distribution of this performance index is shown in **Table 8.** There were no major differences in this performance in-

Table 6
Collateral Requirements for Loan

	Any collateral	*Type:*		*Business collateral and compensating balance*	*Compensating balance*
		Business	*Personal*		
Holding companies:					
Yes	58%	51%	38%	5%	6%
No	55%	40%	46%	6%	8%
Branching type:					
Unit	60%	58%	31%	7%	4%
Limited	57%	46%	42%	4%	8%
Statewide	57%	44%	46%	4%	6%
All types:	*58%*	*49%*	*39%*	*5%*	*7%*

Table 7

Average Rating of Bank Performance on Characteristics[1]

Characteristic	*Holding companies* Yes	No	*Branching type* Unit	Limited	Statewide
Knows you and your business	1.8	1.5	1.6	1.8	1.6
Provides helpful business suggestions	2.4	2.5	2.3	2.5	2.2
Offers the "cheapest money" available	2.2	2.2	2.1	2.3	2.2
One person always handles your credit needs	1.7	1.8	1.6	1.8	1.6
Convenient location	1.5	1.4	1.5	1.5	1.5
Reliable source of credit	1.7	1.5	1.5	1.7	1.6
Knows your industry	2.4	2.4	2.2	2.4	2.2
Comes to you with ideas for improving bank services to your firm	2.6	2.5	2.6	2.7	2.5
Easy access to loan officer	1.6	1.6	1.5	1.7	1.5
Offers a wide range of banking services	1.6	1.5	1.6	1.6	1.5
Average	*2.0*	*1.9*	*1.9*	*2.0*	*1.8*

1. A rating of 1 indicates "good" performance while a rating of 4 indicates a "not good" performance level.

Table 8

Characteristics Rated "Important" and "Good" on Performance

Index value	*Holding company status* *Yes*	*No*	*Branching regulation* *Unit*	*Limited*	*Statewide*
0	34%	29%	31%	34%	32%
1	18%	20%	21%	20%	11%
2	17%	17%	19%	15%	20%
3	9%	9%	8%	10%	7%
4	9%	5%	6%	8%	11%
5	4%	10%	4%	6%	4%
6	3%	4%	4%	3%	5%
7	2%	2%	*	1%	6%
8	2%	1%	3%	1%	1%
9	*	1%	*	*	*
10	2%	2%	3%	1%	2%
Average index value	*2.0%*	*2.3%*	*2.1%*	*2.0%*	*2.4%*

*Less than .5 percent.

dex by regulatory structure. In all cases the distribution of the index results were skewed towards the low end of possible values. Scores of six or higher were more frequent among firms in statewide branching states, and least frequent for limited branching.

A better measure of performance might compare the number of important characteristics which received a "good" rating to the number of characteristics which were rated as important. Thus, if a firm rated only two characteristics as important, then a performance index value of two indicates that the bank is doing very well, satisfying the customer on the two dimensions of service considered important. This performance index is compared to the number of important factors that the bank *could* receive a good rating on, and not to the total of ten factors, many of which may be unimportant to the firm.

On average, 29% of the firms gave banks perfect scores. This indicates that roughly one-third of the firms were perfectly satisfied with the performance of their banks on items they considered important. This index also showed relatively little variation by regulatory structure (Table 9).

If all firms indicated that all ten characteristics were important and then went on to give their banks top ratings on each characteristic, the number of important factors a bank received a good rating on would be 7090 (ten characteristics times 709 firms). The actual number of important factors identified by 709 firms was 2636; of these, 1471 received a top rating of "good." Dividing the number of important factors banks received "good" ratings for, by the number of important factors, yields a measure of how well the banks delivered what the customers wanted. For the whole sample, banks received a good rating for 56% of the important characteristics identified. While there were some differences by regulatory structures, all were rather small; no holding companies ranked slightly above holding companies, while branching types came in with statewide first followed by unit and then limited.

Other Measures of Performance

In addition to the direct measures of performance such as interest rates, other loan terms, and assessments of bank services provided, the study also asked firms to provide general characterizations of their satisfaction with the performance of their financial markets and institutions. Borrowing firms were asked to report their overall satisfaction with loan terms, whether or not they had ever been turned down, whether or not they received the loan size they desired (and if not, what percentage was received), and overall whether or not their credit needs were being met. Firms were also asked if they had noticed an increase in bank competi-

Table 9

Percent of Firms Giving Banks Perfect Scores

	Percent scored perfect
Holding companies:	
Yes	29%
No	32%
Branching type:	
Unit	29%
Limited	28%
Statewide	33%
All types:	*29%*

Table 11

Turndown Rates

	Percent turned down
Holding companies:	
Yes	11%
No	5%
Branching laws:	
Unit	7%
Limited	11%
Statewide	12%
All types:	*10%*

tion for their business or had been directly solicited by a bank for their financial business.

Overall, a much higher percentage of the firms in unit branching states reported that their credit needs were all met (**Table 10**). In the unit branching states, 67% of the borrowers reported that all their credit needs were met, compared to 58% in limited branching states, and 60% where statewide branching was permitted. A majority of firms indicated that they found the size, terms, and loan transaction to their satisfaction. Of those firms that indicated a low level of satisfaction, the interest rate was most often the source of dissatisfaction.

Turndown rates were lowest in unit banking states and states that prohibited statewide holding companies (**Table 11**). If identical risk distributions are assumed in each state, then credit was least available to firms under statewide branching. The reasons for this phenomenon may be related to bank size and sophistication of loan reviews. Larger and presumably more sophisticated banks may approve proportionally fewer loans than small and unsophisticated firms. Smaller banks may not be able to spot poor risks in analyzing loan applications and may turn down too few applicants. It may also be the case that larger banks face a much higher demand for their supply of loanable funds and as a result must turn down more applicants.

On the other hand, local banks that have stable management may have access to accumulated information about local firms which cannot be quantified on loan applications, permitting them to make loans to firms that may appear riskier than they really are. This suggests that some important information may be too expensive for larger firms to collect when standardized procedures are used over a large geographic base.

Table 10

Percentage Distribution of Credit Needs Met

	Credit Needs			
	All met	*Most met*	*Some not met*	*Majority not met*
Holding companies:				
Yes	60%	23%	12%	5%
No	65%	23%	8%	4%
Branching type:				
Unit	67%	22%	8%	3%
Limited	58%	25%	13%	4%
Statewide	60%	20%	10%	10%
All types:	*61%*	*23%*	*11%*	*5%*

Most firms reported that they received the full of the amount of the loan that they had requested. Firms in unit branching states and states that prohibit statewide holding companies most frequently reported receiving the full amount of their request, with 91% of the borrowers reported receiving the full amount in unit states compared to the least frequent, statewide branching states, where borrowers reported 85% success.

Roughly 42% of the firms reported that one or more banks had actively solicited their business, a potential measure of the intensity of competition for small firms' business. For the most part, there were few differences by regulatory structure, the most notable exception occurring for firms in statewide branching states, where 47% of the firms reported active solicitation.

Firms in statewide branching environments were also more likely to report increased competition for their banking business during the last five years (**Table 12**). Thirty-three percent of these firms reported more competition, compared to 27% of the firms in unit states. Interestingly, the proportion of firms reporting less competition in their local markets was also highest under statewide branching, with ten percent reporting less competition compared to six percent of the firms in unit states.

The majority of survey respondents do business with either one or two banks, regardless of the regulatory structure. On average, 56% do business with one bank and 34% do business with two banks. This is indicative of close banking relationships with a small number of banks regardless of the size of the local financial market. The actual number of banks (or branches) in the local market does vary substantially, with more banks populating these markets where statewide holding companies or statewide branching are permitted.

Summary and Conclusions

This paper examined the experience of 709 firms in 11 states with respect to their experience in financial markets subject to

Table 12

Change in Competition

	Much more	*Slightly more*	*No change*	*Slightly less*	*Much less*	*No opinion*
Holding companies:						
Yes	10%	15%	50%	3%	5%	17%
No	9%	22%	48%	3%	4%	14%
Branching type:						
Unit	9%	18%	50%	2%	4%	17%
Limited	10%	15%	51%	3%	5%	16%
Statewide	13%	20%	40%	5%	5%	17%
All types:	*10%*	*16%*	*50%*	*3%*	*5%*	*16%*

different types of bank branch banking regulations. Using direct measures of bank performance on loans made, firm assessments of bank performance on the provision of important bank services, and general assessments of the level of competition and satisfaction with bank services, the various regulatory structures were studied for identifiable patterns of performance that might support one type of branching regulation over another.

Overall, the results indicated that there were few differences across regulatory structures. If the gains to improvements in competition (however achieved) were relatively small to begin with, then this empirical finding is not surprising, especially since any gains from increased competition are likely to be passed on to the customer on many margins. The differences in findings for every characteristic studied were summarized, substituting a 1 for the most favorable bank performance and a 3 for the worst. Firms in states limiting holding company expansion did relatively well, ranking first in thirteen of the twenty performance measures studied. Counting loan size, maturity, and the performance index as only one measure each, the limited holding company states score nine out of thirteen. By branching states, the results were less clear. This is consistent with the notion that local markets are reasonably competitive regardless of the branching law, and that increasing state level concentration in banking through acquisitions permitted by statewide holding companies does not improve the performance of the banking system for small firms. ☐

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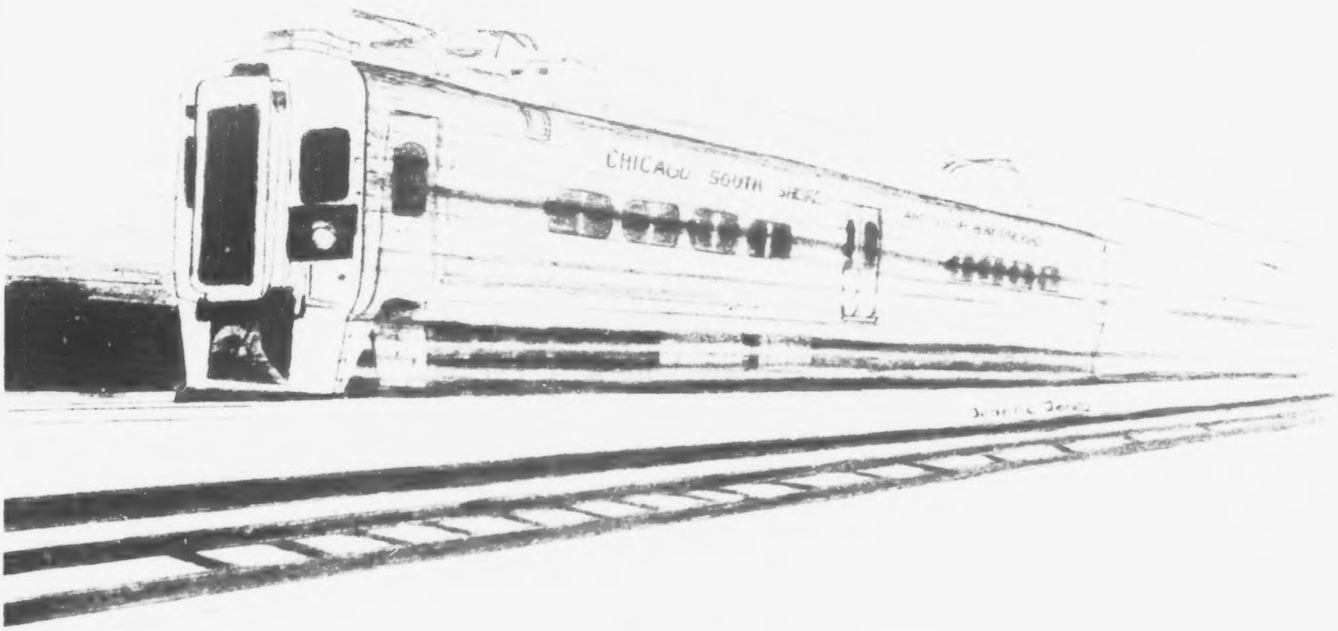
William L. Sartoris and John A. Boquist — **Indiana Banking Profile**

Morton J. Marcus — **County Level Personal Income During the Great Recession**



Progress on the South Shore

In this issue . . .

In our last issue we carried a series of articles on banking and the state of Indiana. Few topics arouse as much emotion, among the few who care, as the banking question. Without intent to inflame, but rather to inform, we offer another article on the subject. This piece, by William Sartoris and John Boquist, offers detailed statistical evidence on banking practices in the state.

As relief from the banking question, we also offer another ride on the South Shore line, Indiana's proud surviving rail commuter service. Our conductor, George Smerk, takes us down the track to see the progress which has been made since our last journey in February of 1982.

Readers who miss the statistical tables which had graced these pages in previous issues can receive the same data by calling the editor. We anticipate that those series will once again be published in the second half of this year, on a space available basis.

Morton J. Marcus
Editor

Indiana Business Review

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George M. Smerck

Professor of Business, Institute of Urban Transportation, Indiana University, Bloomington

On October 23, 1982, the Northern Indiana Commuter Transportation District (NICTD) sponsored a dedication of the new commuter rail cars for the Chicago South Shore and South Bend Railroad. It marked a key point in the renaissance of the last electric interurban in the United States. Ten years earlier, even the most sanguine observer would have had difficulty in predicting a bright future for the passenger commuter service of the South Shore, much less new cars or new anything. Yet that beautiful fall Saturday saw the end of the beginning of major improvements to the South Shore Railroad in official recognition of major changes to an historic rail service.

In his speech at the dedication, Governor Robert Orr pointed out the importance of the South Shore in the past development of the northwest Indiana area and expressed his strong hope that the South Shore would continue to play a key role in the economy of that region of the state stretching eastward from the state line to South Bend. The dedication was a milestone in the process that began in 1977 with the creation of the Northern Indiana Commuter Transportation District to preserve and improve the passenger service of the South Shore Railroad. It was a mark in time that showed that the goal of preservation had, indeed, been reached and that NICTD was well on the way to improving the service.

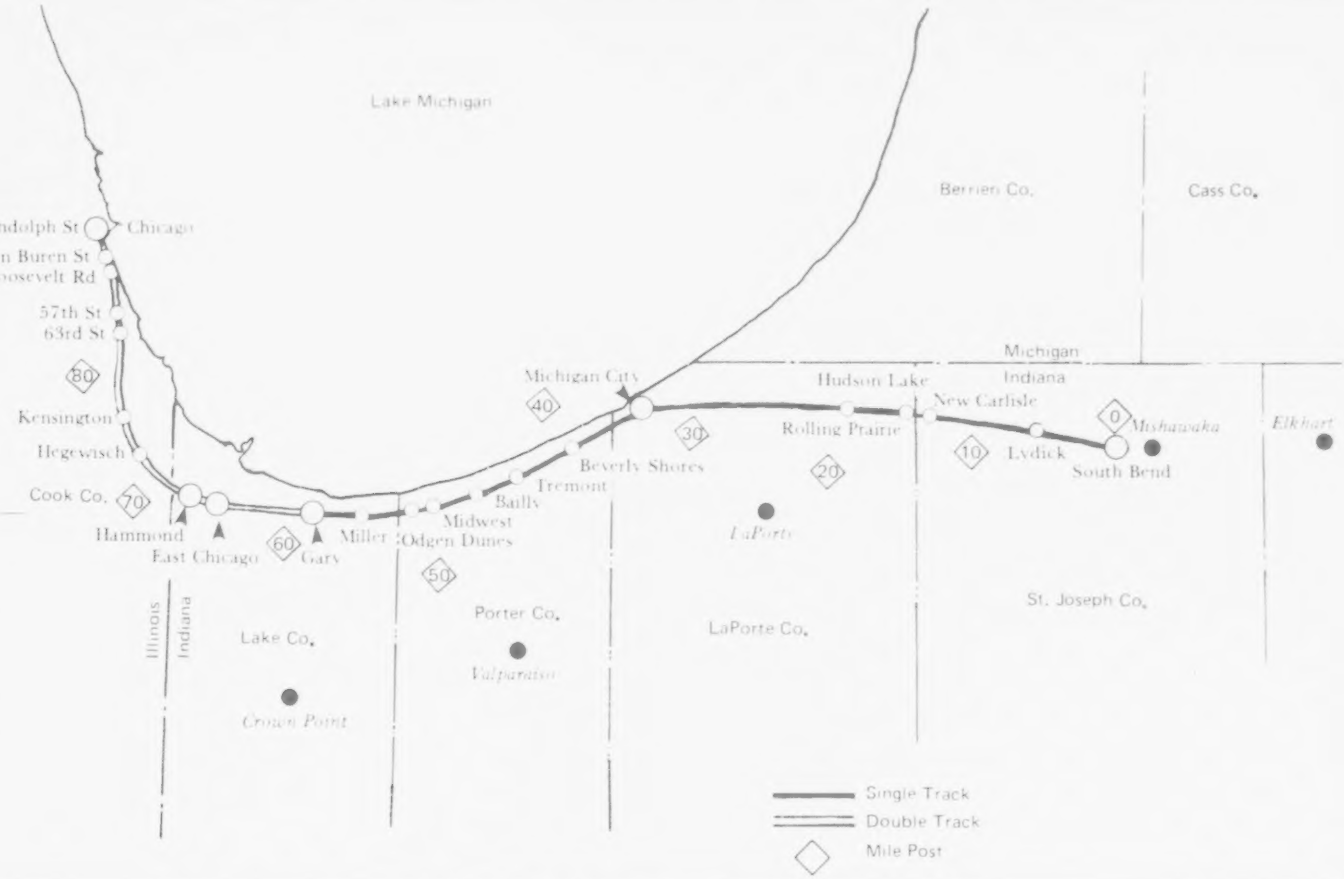
The South Shore project—the largest mass transportation project in Indiana—has been the subject of previous articles in these pages. To refresh the reader's memory, the South Shore Railroad in 1977 had petitioned to discontinue its passenger service. The short-line rail carrier, operating between Chicago and South Bend through Hammond, East Chicago, Gary, and Michigan City, has been controlled by the Chessie System since 1966. After its takeover, the Chessie had continued to operate the passenger service initiated back in 1908. In addition, the South Shore operated a relatively profitable freight service, mainly unit trains of coal destined for generating plants of NIPSCO and for Bethlehem Steel. The electric passenger cars operating on the railroad had all been built in the late 1920s and were, therefore, all about 50 or more years old when the railroad petitioned the ICC to discontinue passenger operations. A major study of the South Shore corridor carried out by the Institute for Urban Transportation at Indiana University indicated that continuation of the railroad passenger service was in the best interests of the state and the area served. This study formed the basis of the justification for federal mass transit funds under the capital assistance provisions of the Urban Mass Transportation Act of 1964, as amended.

Plan for Revitalization

NICTD was created under provision of a 1977 Indiana law and set up with a major initial goal of preserving the service and eventually of improving it. A major three-part capital project was undertaken to replace the old cars, to improve the electrical substations that feed 1500 volts DC to the overhead catenary from which the multiple-unit electric cars draw their power, and to improve the maintenance facility for the new cars.

The Northern Indiana Commuter Transportation District area comprises Lake, Porter, LaPorte, and St. Joseph counties. Over the years since June 1977, a combination package of various sources of aid for the capital project was put together. In addition, NICTD is also the public agency through which federal and state funds flow to help cover the operating deficit of the railroad. The federal government provided 80% of the money needed for the capital improvements. The initial capital improvement program for new cars, new electrical supply system, an expanded and improved maintenance facility, and improvements to Randolph Street Station in Chicago cost $67.5 million.

Governor Orr observed at the dedication that Indiana has played a big role in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Berrien Co.
Cass Co.
Randolph St
Chicago
Van Buren St
Roosevelt Rd
57th St
63rd St
80
Kensington
Hegewisch
Cook Co.
70
Hammond
East Chicago
60
Gary
Miller
Odgen Dunes
Midwest
Bailly
Tremont
50
Beverly Shores
40
Michigan City
30
Rolling Prairie
20
Hudson Lake
New Carlisle
Michigan
Indiana
10
Lydick
0
South Bend
Mishawaka
Elkhart
LaPorte
Illinois
Indiana
Lake Co.
Crown Point
Porter Co.
Valparaiso
LaPorte Co.
St. Joseph Co.
Single Track
Double Track
Mile Post

the renaissance of the South Shore commuter service and that the state has a stake in the potential economic development benefits arising from its improvements. In 1977 the state appropriated $3.6 million to be matched by the four NICTD counties. In addition, Indiana also provides money to all mass transit operations in the state to help match federal capital and operating grants through the Public Mass Transit Fund; this fund is based on .76% of the gross sales tax revenues.

In further aid to NICTD, the Commuter Rail Service Fund was established under state law in 1980 to provide money through the Governor's office to the Northern Indiana Commuter Transportation District; this is achieved by diverting the revenues of the indefinite situs tax on leased rail cars to the Governor's office and then to the Commuter Transportation District. The Electric Rail Service Fund was established under a 1981 state law in which the taxes paid by the South Shore railroad to the four Indiana counties flow to the trustees of NICTD rather than to the local coffers.

In 1981 an agreement was worked out with the South Shore Railroad by which NICTD agrees to cover all operating deficits of the passenger service. A major cost allocation study was carried out to separate the costs of freight and passenger service because, by law, the District cannot pay for freight service. With agreement on NICTD covering the passenger losses, the South Shore Railroad is now free of the burden of passenger losses. The railroad contracts to run a certain amount of service for NICTD. It is accurate to say that NICTD operates a passenger service indirectly. NICTD is more than a pass-through agency; it is an operating agency but it does not directly control the resources, human and material, that provide the service.

Forty-four New Cars Purchased

By the end of 1983, considerable progress had been made in the capital improvements. The most visible part of the progress is the 44 new, stainless steel electric commuter cars serving the South Shore corridor. The 85 foot long cars, seating 93 passengers each, were designed to be robust and relatively simple in their mechanical and electrical gear in order to insure reliable operation. The cars were delivered under contract with the Sumitomo Corporation of America and built by Nippon Sharyu Seizo Kaisha. The car bodies and truck assemblies were built in Japan and shipped to the U.S. where the final assembly was carried out by the General Electric Corporation at its Cleveland Works. The traction motors, control systems, brakes, air conditioning, seating, and other finishing components were of U.S. manufacture.

Sumitomo was the successful low bidder for the car order under the rules of the Urban Mass Transportation Administration as specified in the Urban Mass Transportation Act of 1964, as amended. The initial order was placed in 1980 for 36 cars; a year later an additional order for 8 more cars was placed.

Less visible to the public than the cars are the new, solid-state electrical switch gear and other equipment installed in the electric substations between Michigan City and the state line. The main shop building at Michigan City, originally built in the 1920s, was extended by 60 feet to the east, and an addition was built to the north for parts storage in order to service the new cars. Other major internal improvements were made to the shop, including a drop pit to allow the wheel assemblies and traction motors to be lowered from the cars easily and quickly to speed maintenance and cut costs. A wheel truing lathe that will enable the car wheels to be turned and kept round without removing them from the cars was installed, along with a new overhead crane. At the end of 1983, an automatic car washer and other cleaning facilities were under construction adjacent to the shops building.

The new cars are more attractive to most modern eyes than the 55-year-old veterans that they replaced. The new equipment is partially responsible for perhaps the most noteworthy event to touch the South Shore in 1983, which was the 18% increase in ridership. Before NICTD came on the scene, South Shore ridership had declined to less than 7,000 passengers per day. By the end of 1983, it was regularly running at over 9,000 riders a day and the traffic growth was well in line with the predictions made in the Institute for Urban Transportation study which predicted approximately 17,000 daily South Shore riders by the year 2000.

Building Off-peak Business

A modest but effective marketing and promotional program has been carried out to stimulate off-peak ridership during the weekdays and especially on Saturdays and Sundays. Events in northwest Indiana have been promoted, such as the Ethnic Festival in South Bend, trips to the dunes parks, cross-country skiing in the winter, baseball and football games in Chicago, and various shows and concerts. As part of a revenue boost and marketing program, NICTD recently raised basic fares 10%, but instituted a special ten-ride off-peak ticket that sells at a 22% discount. More will be done in the marketing and promotion of off-peak service as funds become available. This is essential activity because the South Shore is burdened by severe peaked demand, as are all commuter railroads; at certain times many of the trains are nothing more than equipment moves to get cars in position to haul another bunch of people. Attracting almost any increase in ridership to off-peak times or directions can be a major contributor of revenue.

With all the capital improvements made so far, and new cars exclusively in operation since Labor Day 1983, a more attractive service is now possible, but there is still no dearth of problems facing NICTD. Many of these are problems inherent in running a commuter railroad service with its highly concentrated and unitary direction of patronage at peak hours.

A classic case of good news/bad news existed in late 1983 and early 1984 as an illustration of commuter railroad dilemmas. The gratifying increase in ridership has caused serious overcrowding on South Shore trains during the morning and afternoon rush hours. The obvious solution is to operate more trains or to add more cars to present rush hour trains. But cost is a major factor in running additional trains: one extra six-car train, run five days a week, will cost about $300,000 per year. NICTD is reluctant to spend so much in these tight financial times, especially with unknown potential revenues. Eventually, additional trains will probably be run, but not until NICTD is in more prosperous financial shape.

Improved prosperity may be an elusive target for NICTD. NICTD's financial condition depends on passenger revenue, federal operating aid, and the funds generated by other revenue sources, many of which are based on the health of the economy. The Reagan administration budget for fiscal year 1985 calls for a 38% cut in federal operating aid, hardly a cheerful matter for NICTD since it lacks taxing power of its own. The option of running additional trains is apparently foreclosed for the immediate future. But what to do about train overcrowding that produces complaints from customers, draws petitions with over 700 names, and threatens to choke off the growth in patronage?

In coming to grips with the overcrowding at rush hour, a more attractive possibility to NICTD is adding an additional two cars to the present six-car make-ups of several peak hour trains. One difficulty with this is that NICTD cannot run more than six-car trains at the present time, even though the cars are designed to run in eight-car trains. The problem is institutional, not technical. The South Shore trains utilize Illinois Central Gulf Railroad electric commuter railway track between Kensington on the south side of Chicago and Randolph Street in the Loop; the ICG, claiming power problems, has refused to allow more than six-car trains to be operated. The ICG claims that eight-car make-ups of South Shore cars, along with the peak service by ICG trains, will overload the substations between Kensington and Randolph Street. The short-range solution, NICTD hopes, is to convince the ICG that trains of eight-car length can be run without disrupting service. Tests of eight-car South Shore trains were carried out on the ICG early in January of 1984 to determine if power use threatened the electrical integrity of the ICG's power distribution system. So far the ICG has still resisted NICTD's efforts to add cars. The

District will attempt to work with the Chicago Regional Transit Authority, under whose aegis the ICG receives public support, to see if more cooperation can be joined and greater comfort obtained for South Shore riders.

More Funding Needed

Despite a panorama of funding sources, there are serious financial problems still facing NICTD. The cutbacks in federal aid to cover transit operating costs had a serious impact on NICTD's efforts to improve the quality and quantity of South Shore service. In order to provide needed funds, NICTD is contemplating the purchase of the South Shore Railroad from the Chessie System. This would allow NICTD to balance the passenger losses with freight profits. This matter is being studied carefully by NICTD, and the General Assembly has given its permission, although expressing some concern that a public body such as NICTD would operate the freight service at a profit. The legislators insisted that two additional trustees be appointed by the Governor; the two new board members were to be selected on the basis of their knowledge and experience in finance, management, and/or freight railroading. Under the enabling legislation, NICTD cannot sell bonds for the purchase before May 1, 1985, and the District must have the permission of the Indiana Transportation Coordinating Board before bonds can be sold.

If the purchase goes through, NICTD will be returning to a time-honored practice of rail common carriers, which is internal cross-subsidization of services. In the ideal, with a profitable freight service to subsidize the passenger operations, there will be less need to use tax monies for the support of passenger service. NICTD would also be relieved of much of its present concern over changes in federal policy and support levels.

Improvements to the cars, electrical system, and the maintenance facility have almost been completed, but many capital improvements remain to be carried out. Station upgrading looms large in the future projects of NICTD. The most singular of the station improvements will be relocation of the terminal at South Bend from the present Bendix Drive site into the Michiana Regional Airport. The likelihood of this project moving forward in 1984 is excellent. If this is carried out, South Bend will join Cleveland (and soon Philadelphia and Chicago) in having airports served directly by rail. The Michiana Regional Airport is also served by local and intercity bus service and is the transportation center for the area.

A new station will be constructed in 1984 at Highway 49 and the South Shore Railroad, just north of Chesterton. In design, this new station will follow the classic pattern of the present Beverly Shores station. A new multimodal station, serving local and intercity buses as well as the South Shore, is being built in Gary as a combined effort of the Indiana Tollway Commission and the City of Gary; this is not an NICTD project. Over the next several years, station improvements or new construction will be carried out at Michigan City, East Chicago, Hammond, and some of the smaller stations, all with the aim of improving the adjuncts to South Shore service. New parking lots with better illumination and security are needed.

A major undertaking will be upgrading and improving the Randolph Street station in Chicago. The present ancient and disreputable facility has to be replaced because there are severe problems in getting the new cars into all the present platforms. The effort is a joint project of NICTD and the Chicago area's Regional Transportation Authority. This project has been delayed for a time—it was supposed to be completed by October 1983, but had not even been started at that time—but it is hoped that construction on a more adequate and attractive station will be started at Randolph Street before 1984 is over.

To the end of improving the quality and quantity of service all along the South Shore, some interesting and exciting things will be undertaken. In the next year or so, all the electrical substations east of Michigan City will have new electrical switchgear installed, and the RTA will complete a new substation at Hegewisch and in downtown Chicago at Monroe Street near the Art Institute of Chicago. These substation improvements will provide an adequate supply of electrical power along the entire South Shore Railroad. Also, as part of the improvements between Michigan City and South Bend and the new South Bend terminal, the rail between Michigan City and South Bend, which is now jointed rail, will be welded. This will improve the smoothness of the ride and reduce maintenance costs. Before the end of the decade of the 1980s there will probably be improvements made to the catenary system, which is the overhead contact wire which delivers the power to the cars. A self-tensioning catenary system, modeled after the current installation between downtown and the airport in Philadelphia, is a possibility. Such improvements to the catenary should be made to help eliminate breaking of wires during the extremely cold winter weather.

The whole environment about the railroad needs to be made safer. Improvements are needed in grade-crossing protection along the whole of the line. The present part-time security force should be expanded to protect South Shore property and the person and property of the patrons. As part of both security and station amenities, each major station should ideally have a 24-hour convenience store located within it to insure constant traffic at the location.

A major improvement to the service would be an eventual return to hourly service between South Bend and Chicago and half-hourly service between Gary and Chicago. Another important part of the service improvement is the need to speed up the service, especially at rush hour. Perhaps limited stop or skip-stop trains are needed; for example, trains from South Bend or Michigan City might not make any stops west of Gary during rush periods. To improve service from Hammond and Hegewisch to Chicago, some rush hour trains might originate at Hammond.

Benefits from the South Shore

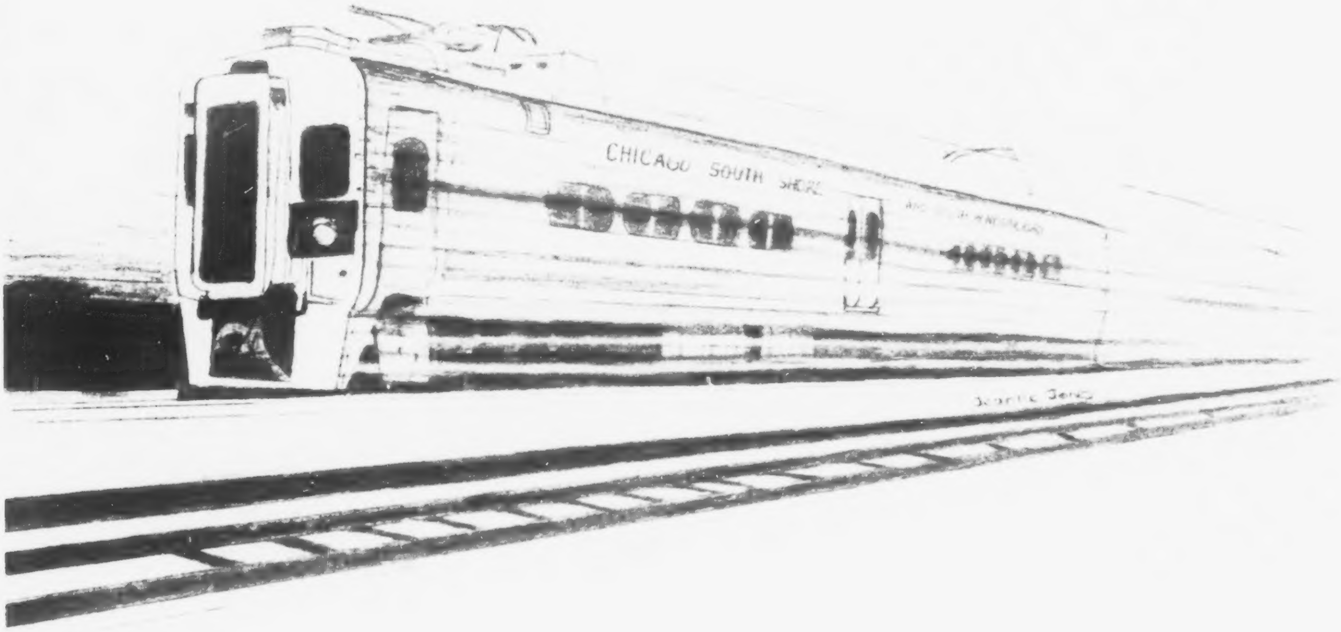
What is all the effort for? NICTD has

fulfilled its original goal of maintaining the service and making some improvements to it. The improvements to fixed facilities over the next few years should complete the large initial capital portion of the project. Commuter rail service between northwest Indiana and Chicago will become more reliable and more attractive. Northwestern Indiana will be a more agreeable place to live for people employed in Chicago. High speed, reliable commuter rail service should be a powerful attraction to many Loop workers who would otherwise live in the Illinois suburbs of Chicago. Moreover, businesses needing fast and easy access to the Chicago Loop may find that locating along the South Shore will provide them with that access. The South Shore service can be a veritable backbone of public transportation service in the northeast Indiana corridor.

In addition to benefits to the Hoosier state, there are many benefits to Chicago as a result of improved South Shore service. As ridership increases on the South Shore, the additional people going into Chicago will not add to the traffic burdens of the highway system and to the burdens on the limited amount of parking space in the Chicago Loop. Moreover, the additional travel will not add to the air pollution in northwest Indiana or in Chicago, a benefit not to be sneezed at.

The upgrading of facilities and service on the South Shore may help create an environment for major improvements in the economy of northwest Indiana, a portion of the state that needs much help. Part of the task of rejuvenating this old industrial area lies in replenishing the infrastructure. A first class commuter service through the region cannot fail to be helpful.

There may be additional responsibilities and opportunities for NICTD in the future. It is not at all avoidable or improbable that NICTD will get the responsibility to run the commuter service between Chicago's Union Station and Valparaiso, Indiana, which is now under the aegis of Amtrak. NICTD is also beginning studies of expansion for the 1990s; these would see extension of South Shore service to the south in Lake County in order to provide better transportation to what is now the more rapidly growing portion of that county. The upgrading of service on the Amtrak



line (which now has only two round trips a day) and projecting rail service south toward Crown Point or beyond, should be a major aid in the development of the southern portion of both Lake and Porter counties. In all such development, it is most likely that expansion of South Shore service will take place along existing rail rights-of-way; little or no new right-of-way will be acquired.

Whether or not these improvements will have a major impact on this portion of the state still remains to be seen because the improvement in transportation by itself cannot achieve miracles. But it is hoped that the major upgrading of South Shore service will help change the mix of economic activity in northwest Indiana and assure its prosperity in the future. Because of its superior entrance into Chicago and its ability to handle freight as well as passengers, the South Shore has survived as the last of the great electric interurbans. Without doubt, the South Shore will celebrate its centenary in 2008 as a carrier far different from that foreseen by its original promoters and as an institution unique to Indiana. ☐

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Indiana Banking Profile

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The authors wish to acknowledge the assistance of Stephen E. Houck in preparing this study. The data sources were the *FDIC Bank Operating Statistics, 1981,* and the *Sheshunoff Banks of Indiana, 1982.*

The profile of Indiana banks developed in this study reveals that the banking structure of the state may not be encouraging to the type of economic development the state needs in the future. While bank lending practice is critical to new and expanding businesses, and bank services enhance business operations, Indiana banks compare unfavorably with their national counterparts along several important dimensions, particularly in attracting and growing the deposits that serve as the basis for lending. The banks also place relatively less emphasis on commercial and industrial loans, critical for economic growth, and more emphasis on security investments. (See the general conclusions to the study in **Exhibit 1**). It could be argued that the Indiana banking community is merely reacting to the less-than-favorable business conditions that have recently existed in the state. In our view, however, banks should take a proactive role, rather than a passively reactive one, so as to serve as the catalyst for the economic development the state needs. Without strong credit facilities and attendant bank services, the state will be less attractive for business and entrepreneurship. Meanwhile, less restrictive branching regulations in other states may be positively related to commercial credit extension. Perhaps Indiana could benefit from a similar relaxation of branching restrictions.

Exhibit 1

A Summary of Conclusions

Indiana Banks vs. Similar Sized Banks in the U.S.

- Indiana banks lag behind in the relative amount of deposits and in the growth rate of deposits
- Indiana banks have been far less aggressive in the purchase of large denomination certificates of deposits as a source of funds
- Indiana banks make about the same volume of loans relative to deposits, but the Indiana deposit base is smaller
- Indiana banks dedicate a smaller proportion of the total loan portfolio to the commercial and industrial loan category
- Indiana banks as a whole dedicate approximately one half of their entire loan portfolio to retail loans
- Indiana banks maintain much larger portfolios of marketable securities
- Indiana banks provide and use relatively fewer correspondent services
- Indiana banks are uniformly less profitable

Indiana Banks on a County-wide Comparison

- Counties with the largest cities tend to have the smallest number of banks per 10,000 in population
- Counties surrounding large cities have banks with low deposits per capita adjusted for income
- Counties around Indianapolis and in the north-central region have banks ranking high on the loan-to-deposit ratio
- Banks operating in counties with few banks tend to be more profitable
- Counties that are bordered by the Ohio and Wabash Rivers and face little competition from out-of-state banks tend to be more profitable

Effects of Varying Bank Regulations

- The average number of banks per million of population increases as bank branching becomes more restrictive
- Branching restrictions and the existence of multibank holding companies have little impact on deposit activity
- Less restrictive branching leads to higher loan-to-deposit ratios
- Banking structure is not related to the extension of commercial loans
- Restrictive branching regulations enable banks to earn higher returns on assets

Many institutions, such as savings and loan associations, credit unions, insurance companies, and commercial banks, provide financial intermediation by accumulating savings of individuals and firms and channelling these funds to those who wish to buy capital. Commercial banks are the most important of these institutions for two reasons. First, commercial banks are in aggregate the largest of the institutions, controlling over 39% of the assets in financial institutions. Second, commercial banks are the primary suppliers of the credit that enables business to build, maintain, and improve the facilities necessary for research, production, and providing of services.

Either because of regulation, capabilities, or willingness, other financial institutions cannot provide the level of loans and services to business that commercial banks provide. Particularly, commercial banks provide the working capital financing for business, and they are virtually alone in providing cash management, payments, collections, and reporting services. Businesses need these financing and corporate services or else their growth rate and the accompanying economic development will be stunted. At worst, businesses will have to go outside the local area to obtain such banking services, and may thus find it more convenient to relocate outside Indiana.

Major corporations maintain banking and credit relations with institutions throughout the country. For these firms, adequate capital on a state or local level is not particularly constraining. However, smaller firms are constrained from a standpoint of contacts, management time, and search costs. These firms rely predominately on local institutions and have limited options available if local financing is found lacking. At that point, they may stagnate from lack of growth or competitiveness. Moreover, distant lenders with no direct economic interest in the area may charge more and may make decisions solely on business dimensions without a consideration of the economic progress of the community.

Granted, the importance of adequate capital in the success of a business can be overestimated. But it is a necessary condition for success. Even though the state has little, if any, impact on the cyclical swings in the economy and cannot exercise fiscal or monetary policy to twist or shape the desired economic activity, the state through regulation can alter certain factors and resources so as to encourage or discourage the type of economic activity that otherwise would be attracted to and prosper in the area.

Certain national regulations separate commercial banks from the other sorts of financial institutions. Since commercial banks are the most important to business, the purpose of this study is to profile the banking industry in Indiana and to compare it with similar profiles of the banking industry nationwide and in selected states, in order to see the effects of the various types of state banking regulation that exist today. The first part compares Indiana banks with average banks of comparable size in the nation. The second part profiles the industry across counties within Indiana. The third part compares Indiana banks with the average for banks in states selected for their regulations on multibanking holding companies and the extent of branching allowed.

Part I:
Bank Profile by Size Categories

An appropriate comparison of banks requires that the banks included be of similar size. Bank regulation limits the size of the loan any bank can offer to a specified percentage of bank capital. The regulated amount of reserves that a bank must keep against the various categories of deposits also differs with size. In addition, market and economic considerations affect the types of service offered. Small banks may not have a sufficient demand for a particular type of business to justify hiring the requisite specialists. Consequently, they can offer the service only at a low quality level or at a high cost. The sale of large denomination, negotiable CDs is restricted to banks that are large and well-known enough to issue a sufficient volume of these securities to satisfy the resale requirements of the secondary market. Finally, small banks in small communities frequently are deposit-rich in the sense that the amount of deposits outstrips loan demand, whereas large, metropolitan banks have the opposite problems. To alleviate such imbalances, the small banks may sell deposits to the large banks in the form of federal funds, or, alternatively, agree to participate in the large loans negotiated by the metropolitan bank. Given these market differences, regulation effects, and the potential for economies of scale in bank operations, it is necessary to control for bank size to make any meaningful comparisons across a sample of banks. We will conform to standard practice and adopt the amount of deposits as the measure of bank size in our comparisons.

The size distributions of Indiana banks and U.S. banks used in this study are shown in **Table 1**. It is apparent that Indiana is underrepresented in both the very large and very small bank categories. Indiana banks are concentrated in the $25 to $500 million deposit categories relative to all banks. Indiana has no banks in the size group G, over $5 billion in deposits; only three in the category F, $1 to 5 billion; and only two in category E, $500 to $999 million. If the largest 3 banks in Indiana were combined, the resulting bank would only rank thirty-fourth on the list of national banks, would be the third largest bank in Michigan (approximately one-half the size of the largest bank), and third in Illinois (about one-sixth the size of the largest bank and about one-fifth the size of the second largest bank). Looking at the number of banks per 100,000 population, it can be seen that Indiana residents have available to them more banks, 7.4 banks per 100,000 population, than the average for the country, which is slightly less than 6.3 banks per 100,000 population. Of course, the number of banks available is not as important as the number and quality of bank services that are being provided to residents and businesses of Indiana.

Because of limitations on the availability of certain data, size category G will be excluded from many of the comparisons in the remainder of this study. However, since there are no banks in this category for Indiana, this should not be much of a limitation.

Deposit Activity

The deposit-gathering activities highlighted by the data in **Table 2** show that the banks in Indiana have a lower average of deposits per capita than banks nationwide. The deposit base is concentrated in the $25-499 million deposit categories in a pattern similar to the distribution of the number of banks. Not only is the absolute amount of deposits per capita lower for Indiana than for the nation, the growth in the deposits over the last five years is also lower for every size category for Indiana banks. Indiana is behind in the relative amount of deposits, and is falling farther and farther behind over time.

As the market for deposits has changed with new instruments and variable interest rates, banks have had to become more aggressive in attracting deposits. Many banks now issue CDs with denominations greater than $100,000. These CDs are not subject to the Regulation Q interest rate ceilings and are generally negotiable instruments. While there is a strong market for these jumbos for large banks, the data in Table 2 show that they are used by banks in all size categories. Most importantly, note that across all size categories the Indiana banks have been far less aggressive in the use of such CDs as a source of deposits. In the two largest size categories represented in Indiana, the Indiana banks had 4.2% and 13.9% of their deposits in the form of jumbos in group E and group F, respectively, while the national banks in these same size categories had 21.9% and 26.6% of their deposits in them. While the data were not available for banks with over $5 billion in deposits, these are the banks that have typically made the greatest use of these types of deposits.

Table 1

Size Distribution of Banks: Indiana, and the U.S.

		Indiana			*United States*		
Group	*Deposit range*	*Number of banks*	*Percent of total*	*Banks per mil pop*	*Number of banks*	*Percent of total*	*Banks per mil pop*
A	$0-9 million	32	7.9	5.85	2,653	18.4	11.57
B	$10-24 million	111	27.4	20.30	4,702	32.6	20.51
C	$25-99 million	203	50.1	37.13	5,503	38.2	24.00
D	$100-499 million	54	13.4	9.88	1,235	8.6	5.39
E	$500-999 million	2	0.5	0.37	153	1.1	0.67
F	$1-5 billion	3	0.7	0.55	131	0.9	0.57
G	Over $5 billion	—	—	—	32	0.2	0.14
	Total	405	100.0	74.08	14,409	100.0	62.85

Table 2

Deposits in Indiana and U.S. Banks

		Indiana			*United States*		
Group	*Deposit range*	*Deposits per capita*	*5 yr. growth rate*	*% Deposits >100,000*	*Deposits per capita*	*5 yr. growth rate*	*% Deposits >100,000*
A	$0-9 million	$42.56	9.7%	8.8%	$79.59	10.7%	10.0%
B	$10-24 million	352.98	9.4%	8.7%	329.14	12.0%	10.3%
C	$25-99 million	1,812.79	8.3%	9.0%	1,155.63	11.3%	12.5%
D	$100-499 million	1,858.14	7.3%	13.4%	1,037.40	10.1%	18.1%
E	$500-999 million	198.84	−2.0%	4.2%	468.18	8.7%	21.9%
F	$1-5 billion	901.44	5.4%	13.9%	1,168.52	7.0%	26.6%
G	Over $5 billion	—	—	—	2,690.37	NA	NA
	Total	$5,166.75			$6,928.83		

Another development in the raising of deposits is a shift to mail-order deposits. The money market mutual funds were the first to start soliciting deposits through the mail on a nationwide basis. Now banks and other financial institutions routinely advertise for deposits in areas outside their regulated county or state boundaries. The market for gathering deposits, particularly in larger denominations, has become an interstate market, and is rapidly approaching a national market.

From this evidence we can conclude that the Indiana banks have been deposit-poor relative to the national averages and have been less aggressive in purchasing large deposits. The result is that Indiana ranks low in the deposits per capita, and the corresponding growth in these deposits is lackluster compared to the nation as a whole.

Loans and Securities

An important strategic decision for commercial banks is the allocation of funds to the various categories of securities and loans. The loan-to-deposit ratio is commonly used to indicate the relative importance a bank is placing on lending funds rather than on investing passively in securities. The loan-to-deposit ratios for the various size categories of commercial banks in Indiana and in the U.S. are shown in **Exhibit 2**.

The increasing loan-to-deposit ratio as the size of the bank increases indicates that the larger banks have a greater relative loan demand than do small banks. Whether this is due to some natural selection on the part of the borrowers or due to a more aggressive posture by the larger banks cannot be determined. The comparison between Indiana banks and the U.S. banks is mixed. and from $1-5 billion have a just slightly higher loan-to-deposit ratio than the U.S. banks of comparable size. For the other size categories, the Indiana banks are substantially below the U.S. banks, with the most noticeable difference in the under $10 million and the $500-999 million categories. However, care must be taken in drawing much significance for this latter category. The small number of banks in this category suggests that the average can be unduly influenced by the lending practices of one bank.

However, this comparison excludes the banks with over $5 billion in deposits. Since detailed loan data were not available for these banks as a group, the only way to include them is to compare the totals for the state to the totals for all of the U.S. banks. The figures given in **Table 3** clearly show that the loan-to-deposit ratios for all of the banks in Indiana are only slightly poorer than those for all banks in the U.S. Thus, the Indiana banks are making about the same volume of loans relative to the deposits as other banks in the country. However, Indiana achieved a lower level of, and growth in, deposits than the average banks of comparable size. Therefore, the denominator of the loan-to-deposit ratio is relatively smaller for Indiana banks, making it easier for them to meet the average value of the ratio.

Commercial banks are the major source of funds for financing the short- and intermediate-term credit needs of businesses. The amount of commercial and industrial (C&I) loans as a percent of the total loans made by the various size categories of Indiana and U.S. banks are shown in **Exhibit 3.** It is evident from this graph that the proportion of loans made to businesses increases substantially as the size of the bank increases. It is also apparent that the Indiana banks lag behind the average U.S. bank in the proportion of their loan portfolio invested in C&I loans. This lag exists for all size categories.

From the data for all banks shown in Table 3, we can see that the C&I loans represent 41.2% of the total loans for all banks in the U.S. Since the highest percentage for any of the size categories for which

Exhibit 2

Loan-to-deposit Ratio

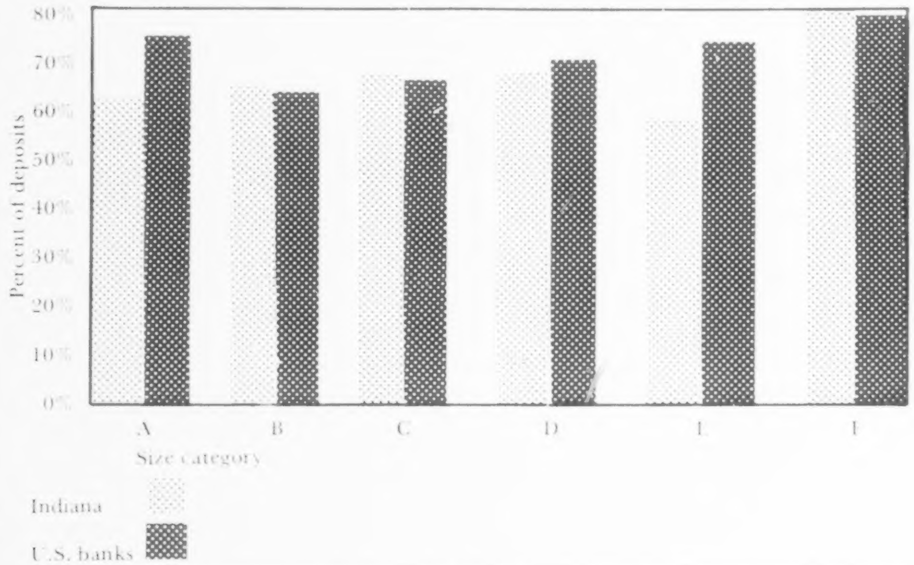
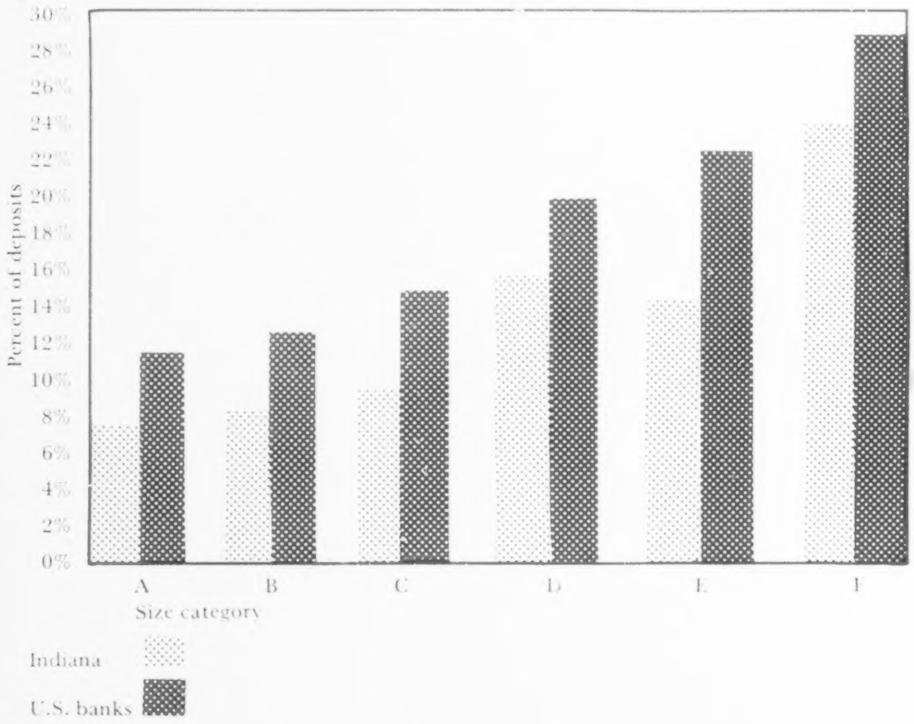


Exhibit 3

C&I Loans as a Percent of Deposits



data was available was 32.7%, a substantial portion of the total C&I loans made in the country must be made by the banks over $5 billion in deposits. Two important factors explain the extent of C&I loans for large banks. First, major corporations must seek banks that have a regulated loan limit large enough to comfortably handle their borrowing requirements. Second, since many corporations need sophisticated cash management and international reporting systems, they will tend to concentrate their loan activity at the large banks that can also satisfy these needs. The noticeable lack of large Indiana banks helps to explain why the C&I loan category represented only 22.9% of the total loans for all Indiana banks. Although Indiana banks are making about the same proportion of loans to deposits as the average bank in the U.S., businesses are clearly underrepresented in their loan portfolios. The question remains: Where are the Indiana banks concentrating their loan activity?

The farm loans as a percentage of the total loans made are shown in **Exhibit 4.** The trend is exactly the reverse of that observed for the C&I loans, with a dramatic fall-off in the proportion of farm loans as the size of the bank increases. This trend is quite reasonable given the concentration of larger banks in urban areas, where the demand for farm loans will be low. While the proportion of farm loans is slightly higher for Indiana banks in the middle three categories ($25-499 million), the banks in the upper and lower categories allocate a smaller proportion of their loan portfolio to farm loans than is true for the comparably sized bank in the U.S. The comparative data shown in Table 3 reveal that Indiana banks, with farm loans accounting for 5.7% of total loans, are on average allocating a slightly greater proportion of their loan portfolio to farm loans than is the average U.S. bank which has only 3.1% of total loans identified as farm loans.

The final loan category portrayed is retail loans as a proportion of total loans. This classification of loans includes all types of consumer loans, auto loans, credit card loans, and mortgages on 1 to 4 family dwellings. The graph in **Exhibit 5** illustrates that Indiana banks exceed the U.S. banks

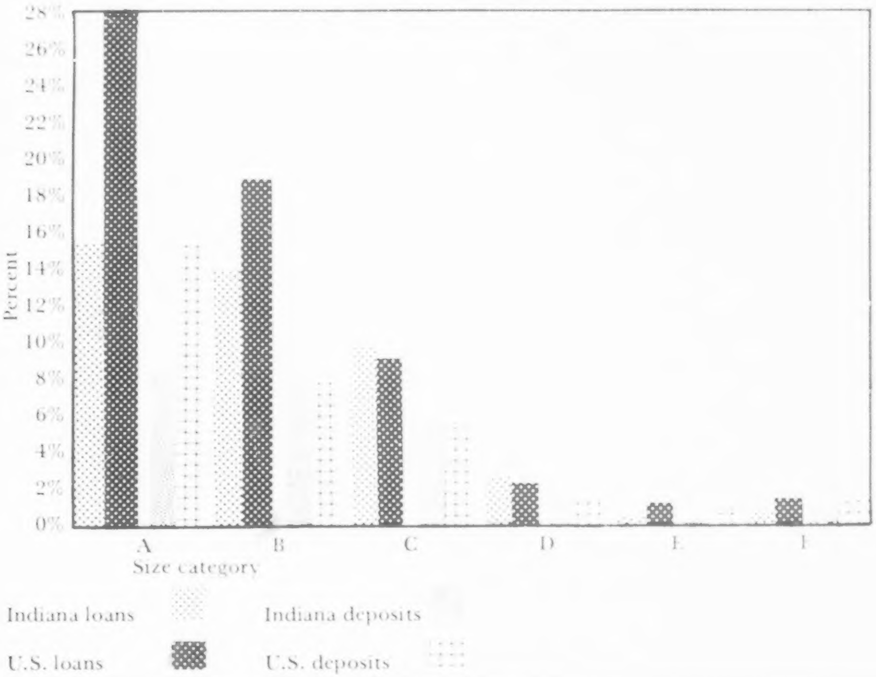
Table 3

Level and Composition of Loan Activity: Indiana and U.S. Banks

Indiana Group	Deposit range	Loan to deposit	C&I loans as % of		Retail loans as % of		Farm loans as % of		Securities as %	
			loans	deposits	loans	deposits	loans	deposits	assets	depo
A	$0-9 million	62.0%	13.7%	7.6%	57.7%	32.0%	15.5%	8.6%	28.6%	32.5
B	$10-24 r..llion	66.1%	13.9%	8.5%	55.3%	33.6%	14.0%	8.5%	29.2%	32.3
C	$25-99 million	67.5%	16.4%	10.2%	54.6%	33.8%	9.6%	5.9%	31.6%	36.3
D	$100-499 million	67.0%	25.3%	15.7%	51.0%	31.6%	2.6%	1.6%	28.9%	34.9
E	$500-999 million	58.2%	30.2%	13.8%	50.9%	23.3%	0.3%	0.1%	34.4%	43.4
F	$1-5 billion	79.7%	32.0%	23.8%	39.7%	29.5%	0.5%	0.4%	11.5%	16.8

Exhibit 4

Farm Loans as a Percent of Loans and Deposits



in terms of the proportion of retail loans in their portfolio for all size categories. For the state as a whole, almost one half of all bank loans made are retail loans. Although it was not possible to obtain a similar breakdown for all U.S. banks, this total would have to be much less considering the proportion of C&I loans for large banks.

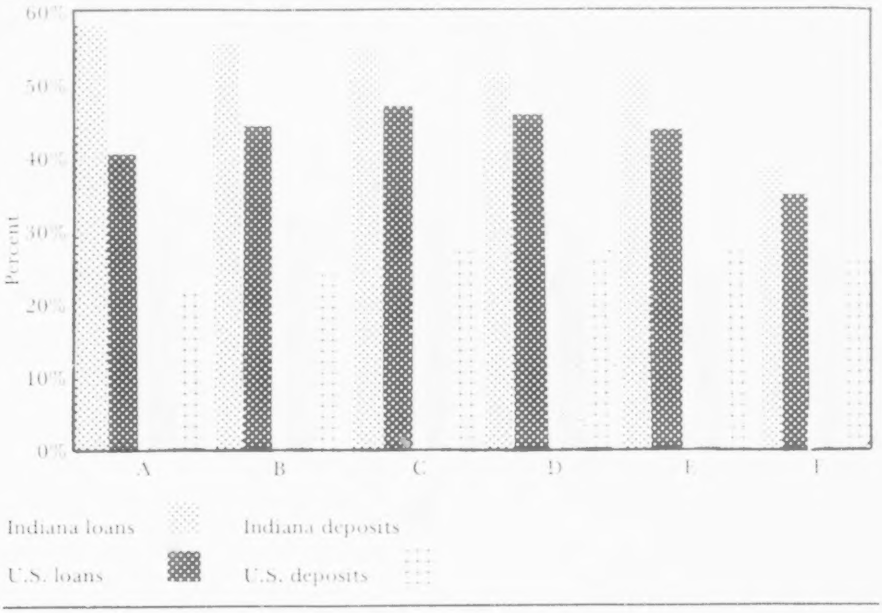
Banks can hold a fairly substantial securities portfolio for liquidity reasons or as an alternative to making loans. Beyond the needs for a prudent amount of liquidity, securities investments substitute for loans as a way to earn a return on invested funds. The data in **Exhibit 6** show the banks' securities portfolios as a percent of assets. The Indiana banks in the two smallest categories hold approximately the same proportion of their assets in securities as do the average U.S. banks of a comparable size. For the next three categories, from $25-999 million, the Indiana banks hold a larger proportion of their assets in securities. Recalling that these three size categories constitute over 63% of the banks in the state, it is apparent that the majority of the banks in Indiana hold a greater proportion of securities than is true for their counterparts throughout the country. The data on all banks contained in Table 3 indicate that the average bank in Indiana has a securities portfolio representing 30.2% of assets, whereas the average U.S. bank has a securities portfolio of only 17.4% of assets.

From the evidence examined on the lending and securities investment activity, we can conclude that the Indiana banks tend to lend out about the same proportion of their deposits as do the average banks of comparable size in the U.S. However, the Indiana banks tend to concentrate more on retail loans than do their counterparts. Although the citizens of the state undoubtedly benefit from the banks' attention to financing their needs, many other sources of consumer financing are available, such as savings and loan associations, credit unions, and small loan companies. A bank making these retail loans does so at the expense of commercial and industrial loans. Unfortunately, other financial institutions offer few alternative sources of this type of financing. Finally, a majority of the Indiana banks have asset structures weighted more heavily in marketable securities than is true for comparably sized banks in the U.S. Either the commercial loan demand wanes in Indiana

United States										
			C&I loans as %		Retail loans as %		Farm loans as %		Securities as %	
Group	Deposit range	Loan to deposit	loans	deposits	loans	deposits	loans	deposits	assets	deposits
A	$0-9 million	75.4%	19.5%	11.2%	40.4%	23.2%	25.9%	14.9%	28.5%	34.4%
B	$10-24 million	65.1%	20.7%	12.3%	44.5%	26.3%	18.7%	11.1%	29.7%	33.8%
C	$25-99 million	66.5%	24.4%	14.9%	47.7%	29.2%	9.1%	5.6%	29.0%	33.1%
D	$100-499 million	70.2%	30.7%	19.7%	45.2%	29.0%	2.4%	1.5%	26.0%	30.5%
E	$500-999 million	74.1%	32.4%	22.1%	43.5%	29.7%	1.1%	0.8%	22.4%	28.4%
F	$1-5 billion	79.4%	32.7%	28.4%	36.1%	27.2%	1.1%	0.8%	17.5%	23.7%

Exhibit 5

Retail Loans as a Percent of Loans and Deposits



or the Indiana banks prefer retail loans and securities investments to commercial loans.

Fed Funds and Correspondents

Banks are active in lending money to one another in what is known as the fed funds market. Banks with excess reserves can sell fed funds to banks with insufficient reserves to meet the regulated fractional reserve requirement. Since the sale of fed funds is essentially a loan to another bank on a very short-term basis, it is a substitute for investing in securities or loans. Detailed data on the sale or purchase of fed funds is shown in **Table 4**. As expected, small banks tend to be sellers of fed funds and large bank buyers of fed funds because smaller banks are deposit rich while larger banks are deposit poor. The smallest two categories of Indiana banks sell more fed funds as a percentage of deposits than comparably sized U.S. banks, while the largest Indiana banks buy more fed funds than their national peers.

Banks use correspondent banks for a variety of services, such as check clearing, specialized data processing services, expert advice, and participation in loans. The banks receiving these correspondent services generally compensate the bank offering the services by carrying compensating balances. These balances are classified in the account "due from or due to other banks." The due from balances represent money that a bank has on deposit with its correspondent or items in collection. The due to balances represent the liabilities of a bank in the amount of the deposits that other banks are carrying with the bank. A net due to balance would indicate that a bank (or group of banks) was supplying correspondent services to other banks. A net due from would indicate that the group of banks were, on balance, users of correspondent services from other banks. The evidence in **Table 5** clearly shows that the smallest banks are large net users of correspondent services while the largest banks are large net suppliers of correspondent services. With the exception of the $1-5 billion bank group, the Indiana banks supply relatively fewer correspondent services. Except in the smallest size category, Indiana banks also use fewer correspondent services than peer banks on a national basis.

These results are somewhat surprising. Since Indiana banks are not allowed to branch across county lines and since they are relatively small, it was thought that they would be heavier users of correspondent services than comparable U.S. banks. In contrast, banks in states allowing

Exhibit 6

Securities as a Percent of Assets and Deposits

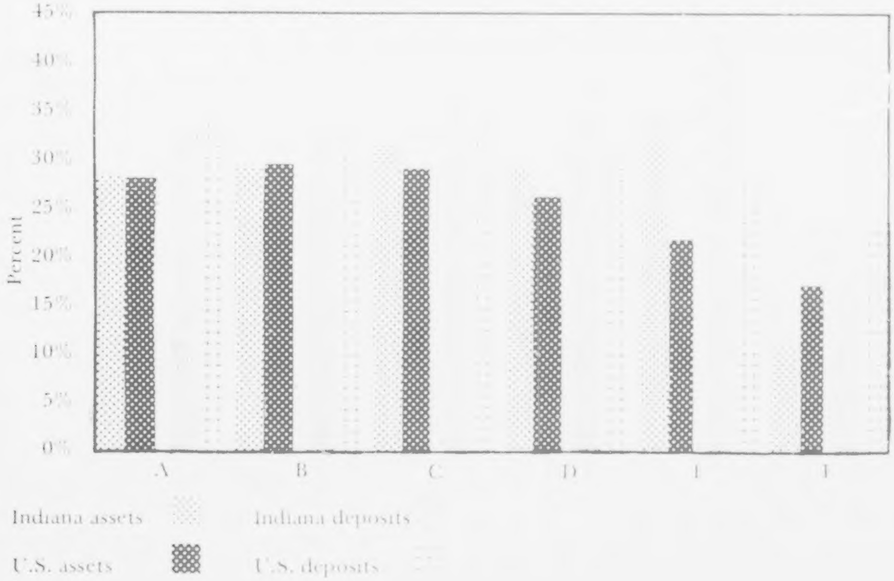


Table 4

Federal Funds Activity: Indiana and United States

Group	Deposit range	Indiana: Net fed funds sold (purch.)	Indiana: As a % of deposits	United States: Net fed funds sold (purch.)	United States: As a % of deposits
A	$0-9 million	971	13.4%	684	10.6%
B	$10-24 million	1,337	7.7%	1,124	6.7%
C	$25-99 million	1,639	3.4%	1,865	4.0%
D	$100-499 million	-1,900	-1.0%	-952	-0.5%
E	$500-999 million	22,899	-4.2%	-43,308	6.2%
F	$1-5 billion	-297,325	-18.1%	272,005	-13.3%
	All banks	-		-69,088,000	4.3%

Table 5

Correspondent Activity: Indiana and U.S. as a Percent of Deposits

Group	Deposit range	Indiana: Due to	Indiana: Due from	Indiana: Net	United States: Due to	United States: Due from	United States: Net
A	$0-9 million	0.0%	9.1%	9.1%	0.3%	8.9%	8.6%
B	$10-24 million	0.1%	5.6%	5.5%	0.2%	7.3%	7.1%
C	$25-99 million	0.2%	2.7%	4.5%	0.4%	7.1%	6.7%
D	$100-499 million	1.5%	5.2%	3.7%	2.5%	6.1%	3.6%
E	$500-999 million	1.9%	2.8%	1.0%	5.0%	4.2%	-0.8%
F	$1-5 billion	9.4%	1.2%	8.2%	5.3%	2.3%	3.0%

broader branching possibilities could provide some of these services through their own branches and would not have to rely on a correspondent relationship. Discussions with bankers from states allowing multi-bank holding companies indicate that the willingness of banks to use correspondent services is greater when they are part of the same holding company. Either the small Indiana banks are more adept at providing the requisite services themselves than is true for other banks, or the services are not being offered by these banks. In the latter case, the customer would be forced to make his own alternative banking arrangements, perhaps out of state.

These results must be interpreted with caution. Other reasons, such as checks in the process of clearing, may explain some of the resultant balances. Also, the extent of correspondent services by the large Indiana banks may not be an indication that they are more aggressive in the provision of correspondent services. It may well be that the large banks in many states are above the $5 billion category and, therefore, are excluded from the sample data.

Profitability

The final area examined in this section is the profitability of banks in Indiana versus the national peer groups. Indiana banks are uniformly less profitable than the national peer groups as shown in **Table 6**. Indiana banks have lower interest spreads (the difference between the rate paid for funds and the rate earned on funds), lower returns on assets, and lower returns on equity. The rates of return provided by the Indiana banks are about two-thirds of those of the comparably sized national banks. The smallest bank group is providing a return on equity of only 4.36%, which is considerably less than the 12.20% earned by the peer group banks.

The Indiana banks reported lower profitability than their national peers because of a significantly lower spread position, resulting from the differences in operating policies. Indiana banks hold more securities in their portfolios, which tend to yield less than more risky loans. Furthermore, those securities with long

Table 6

Bank Profitability

		Indiana			United States		
Group	*Deposit range*	*Net interest spread*	*Return on assets*	*Return on equity*	*Net interest spread*	*Return on assets*	*Return on equity*
A	$0-9 million	5.60%	0.74%	4.36%	6.40%	1.26%	12.20%
B	$10-24 million	4.60%	0.71%	8.37%	5.80%	1.27%	14.06%
C	$25-99 million	4.30%	0.81%	9.88%	5.60%	1.19%	14.38%
D	$100-499 million	4.10%	0.65%	9.28%	5.30%	0.99%	13.52%
E	$500-999 million	NA	0.47%	5.49%	5.10%	0.85%	13.07%
F	$1-5 billion	NA	0.57%	10.20%	5.00%	0.81%	14.20%

Table 8

Summary of Deposit Activity Distribution by Counties

Measure	*Deposits per capita*	*Adj. deposits per capita*	*% Deposits > $100,000*
Maximum	$11,500	1.24	18.5%
Upper quartile	6,969	0.76	5.9%
Mean	5,694	0.64	4.4%
Lower quartile	4,244	0.48	2.2%
Minimum	2,229	0.32	0.3%

Table 7

Summary of Distribution of Banks by Counties

Measure	*No. banks*	*No. banks per 10,000 people*
Maximum	13	3.8
Upper quartile	5	1.8
Mean	4.4	1.3
Lower quartile	3	0.7
Minimum	1	0.1

maturities and fixed rates of interest would earn low returns relative to those currently available. In addition, the loans that Indiana banks do make are highly concentrated in the retail area, an area where banks face considerable competition from other financial institutions. These loans would, therefore, have to be competitively priced and would, most likely, bear a fixed rate of interest. As interest rates rose in a secular fashion over time, the yields on both the security and retail loan portfolios bearing a fixed rate of interest became uncompetitive. On the other hand, banks in the peer groups had a higher proportion invested in commercial and industrial loans which are very likely to carry rates of interest that vary with the level of the current prime rate charged by the lending bank. In our opinion, the differences in operating policies pursued by Indiana banks go a long way toward explaining their relative profit shortfall.

Part II:
Profile of Indiana Banks by Counties

The summary figures for the county distribution of banks across Indiana are shown in **Table 7**. The number of banks in each county ranges from a low of 1 bank in Brown, Ohio, Owen, and Warren counties, to a high of 13 banks in Lake and Madison counties. Since the population of the counties varies so greatly and can greatly influence the number of banks, we examined the number of banks per 10,000 population. The range is from a high of 3.8 in Pike County to a low of 0.1 in Marion County, with an average for all of the counties of 1.3 banks per 10,000 people. The upper quartile dividing line, that is the value exceeded by 25% of the counties, is 1.3, while the lower quartile dividing line is 0.7. It is important to note that this ratio is the number of banks and not the number of bank branches operating in the counties.

These data are illustrated by the maps in **Exhibits 7** and **8.** In Exhibit 7 the counties are classified into three groups: 3 or fewer banks, 4 or 5 banks, and 6 or more banks. The lowest quartile is approximately represented by 3 or fewer banks and the upper quartile by 6 or more. There are several pockets of counties in the lower and upper quartiles. A group of counties adjacent to Illinois in the east-central portion of the state and another cluster in the southern and southeastern portion of the state are in the lower quartile. A concentration of counties in the upper quartile of banks is in the central part of the state from the Indianapolis metropolitan area stretching up toward Anderson.

In Exhibit 8 the distribution quartiles are shown for the number of banks per 10,000 population. It is interesting to note that the counties with the lowest number of banks per 10,000 population are also the ones with the largest cities. For example, although Lake County with 13 banks was tied for the most banks, the large population in the county pushes it into the lowest quartile based on the number of banks per 10,000 people. On the other hand, Ohio County with only 1 bank in the county is in the upper quartile on the banks per population measure because of the very low population in the county. Thus, the existence of a low ratio can be a function of either a small number of banks or a very large population.

Deposit Activity

The summary data for the distribution of the deposit activity across the counties is given in **Table 8.** The deposits per million population range from a high of $11,500 in Dubois County to a low of $2,229 in Brown County. Because of a large variation in the income levels of the counties, the deposits per capita data were adjusted for the income level of the county by dividing the deposits per capita by the personal income per capita for the county. Although the high and the low counties were unchanged by this adjustment (Dubois has a ratio of 1.24 and Brown County has a

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Exhibit 7

Number of Banks per County

X = 6 or more banks
O = 3 or fewer banks

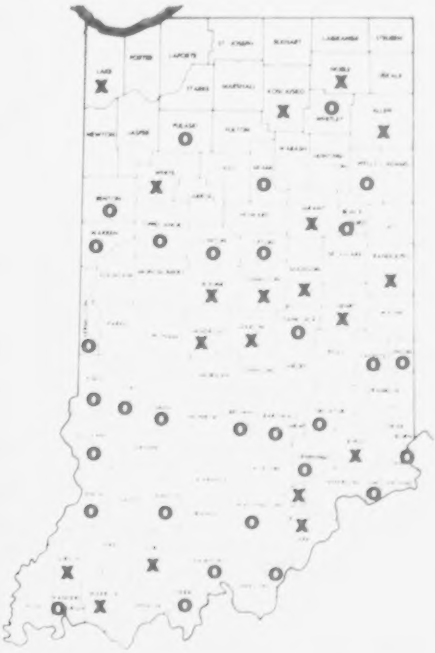


Exhibit 8

Number of Banks per 10,000 Population

X = Top quartile
O = Bottom quartile

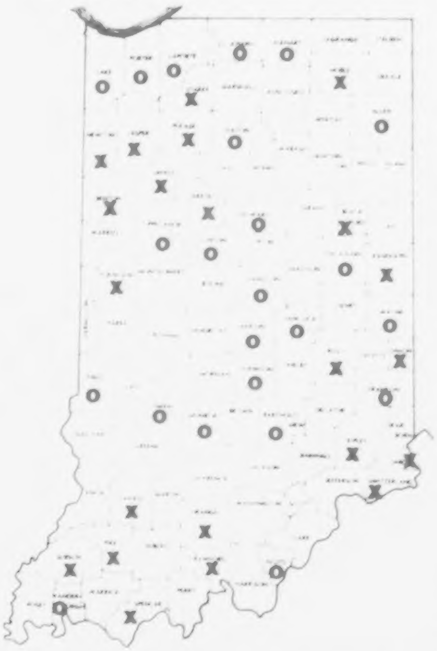
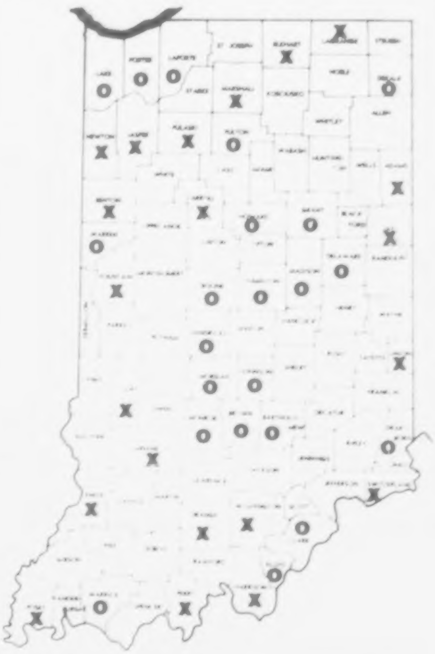


Exhibit 9

Deposits Per Capita Adjusted for Income

X = Top quartile
O = Bottom quartile



ratio of .32), the relative position of other counties changed.

The disiribution of this ratio of deposits per capita divided by the personal income per capita is shown in **Exhibit 9.** The counties surrounding Indianapolis, the counties in the northwest corner of the state nearest Chicago, the counties nearest to Louisville, and the county adjacent to the Cincinnati area are low in deposits relative to income. Since many of the people living in these counties work in the adjacent city, they may do their banking in the county or city in which they work, even if out of state, rather than in the county in which they live. In addition, the adjacent cities have fairly large to very large banks that aggressively advertise and price to attract deposits.

The distribution across counties of the percentage of deposits that are greater than $100,000 (jumbo CDs) is shown for the upper and lower quartile ranges in **Exhibit 10.** Two factors are apparent here. A large city effect is clear with the counties containing Indianapolis, Ft. Wayne, Evansville, Muncie, Terre Haute, South Bend, and Elkhart ranked in the upper quartile. Another potential explanation is the wealth effect whereby the higher wealth concentration in the metropolitan areas contributes to a larger interest in purchasing jumbo CDs.

Comparing these data with the distribution of the number of banks, we see that with the exception of a few counties with large cities and a small number of banks, such as Vigo or Vanderburgh counties, the counties that have a small number of banks and consequently less competition for local deposits are also in the lowest quartile on the proportion of deposits that are over $100,000.

Loan Activity

The summary data for the distribution of the lending activity across counties is given in **Table 9**. The wide disparity of the lending activity is readily apparent given that the loan-to-deposit ratio ranges from a high of 72.2% for Owen County to a low of 15.4% for Switzerland County. C&I loans vary from a high of 35.9% of total loans for St. Joseph County to a low of 3.8% for Warren County, whereas retail loans range from a high of 83.2% for Clark County to a low of 33.0% for Carroll County.

The distribution of the loan-to-deposit ratio by quartiles illustrated in **Exhibit 11** shows a cluster of high lending activity compared to the level of deposits for the counties around Indianapolis. As we saw in the distribution of banks per capita, a particular value for a ratio may be a function of either the denominator or the numerator. For example, since Marion County had a deposit level that was in the middle sector of the data, its high loan-to-deposit ratio must result from a high level of loans. On the other hand, Johnson and Hancock counties are in the lower quartile

Exhibit 10
Jumbo CDs as a Percent of Total Deposits

X = Top quartile
O = Bottom quartile

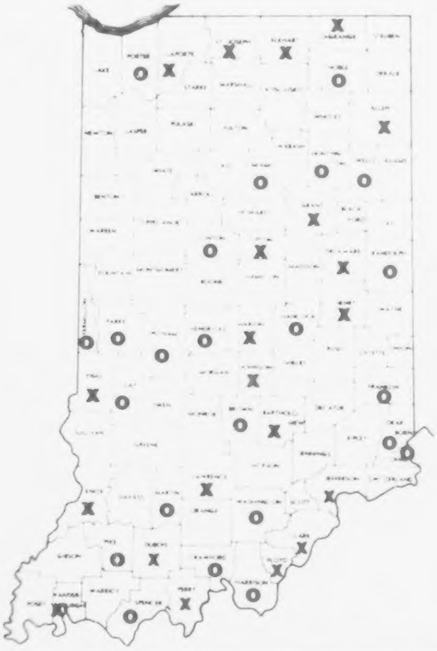


Exhibit 11
Loan-to-deposit Ratio

X = Top quartile
O = Bottom quartile

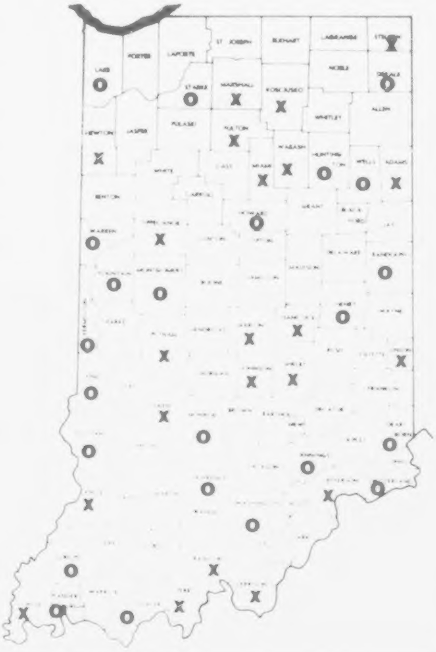


Exhibit 12
C&I Loans as a Percent of Total Loans

X = Top quartile
O = Bottom quartile

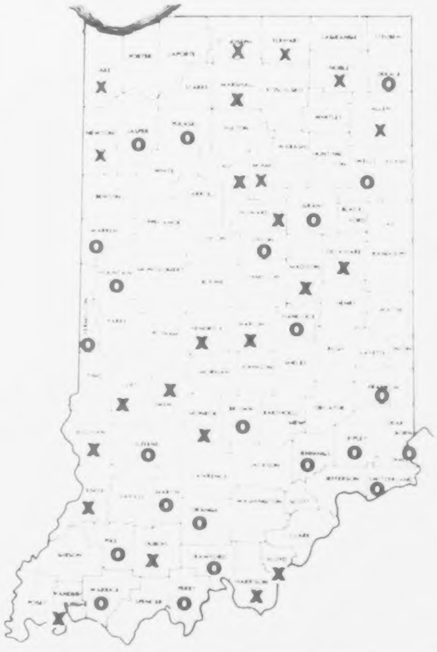


Table 9

Summary Measures of Loan Activity by Counties

Measure	*Loans-to-deposits*	*C&I loans as a % of total loans*	*Retail loans as a % of total loans*
Maximum	72.2%	35.9%	82.3%
Upper quartile	63.2%	21.4%	60.9%
Mean	56.5%	17.4%	53.9%
Lower quartile	51.4%	12.6%	46.6%
Minimum	15.4%	3.8%	33.0%

of deposit levels and, thus, their high loan-to-deposit ratios are a function of a low level of deposits rather than a particularly high level of loans. In addition to the cluster of high loan-to-deposit ratios around the Indianapolis area, there is another cluster in the north-central group of counties.

Since the loan-to-deposit ratio simply measures the proportion of the loans made, it says nothing about the composition of the loan portfolio. Thus, interpretation of this ratio should be done in conjunction with the data on the composition of the loan portfolio shown in the next two exhibits. The distribution of the C&I loans by counties is shown in **Exhibit 12**, the retail loans in **Exhibit 13**.

Examination of Exhibit 12 indicates a concentration of C&I loans around Indianapolis, Muncie, Evansville, the South Bend-Elkhart area, the Lake County area, and the Louisville area. In Exhibit 13, high retail loan activity is scattered throughout the state. The pocket of several counties with low retail loan activity in the northwest quarter of the state also includes several counties with low C&I loans. Evidently the lending activity for these counties is concentrated in farm loans.

As an example of how this data needs to be carefully interpreted, consider Monroe County, which is in the top quartile for both retail and C&I loans. However, since Monroe County is also in the lowest quartile for the loan-to-deposit ratio, its banks make relatively few loans for the deposit base. For the loans that are made, a high proportion are in the retail and C&I categories, and necessarily, a lower proportion in agriculture loans. As another example, consider Switzerland County which had the lowest loan-to-deposit ratio for any county in the state, indicating very few

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Exhibit 13
Retail Loans as a Percent of Total Loans

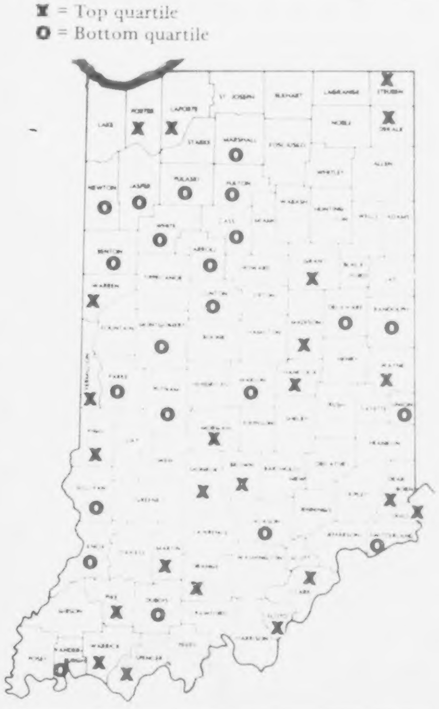


Table 10
Summary Measures of Bank Profitability by Counties

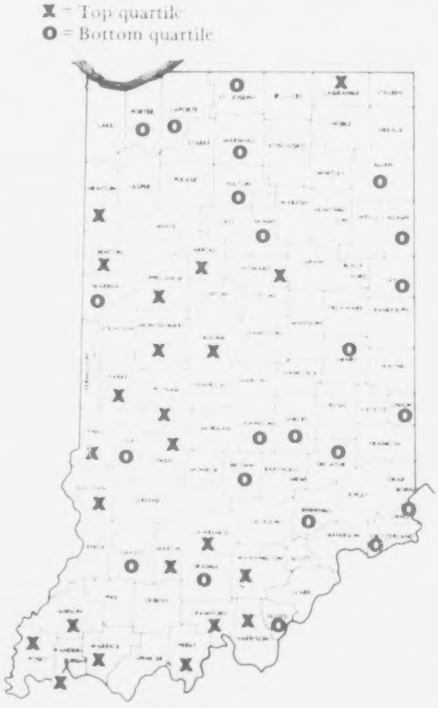
Measure	*Return on assets*	*Return on equity*
Maximum	1.43%	15.20%
Upper quartile	0.88%	10.50%
Mean	0.62%	7.32%
Lower quartile	0.46%	6.15%
Minimum	−2.14%	−28.81%

loans relative to the deposit base. Since it is also in the lowest quartile for both the retail and the C&I loans, the loans that the banks in the county make are agricultural loans. Total lending activity, however, is low.

Bank Profitability

Summary data for the distribution of bank profitability across counties is given in **Table 10.** The return on assets ranges from a high of 1.43% in Parke County to a low of −2.14% in Decatur County. The return on equity ranges from a high of 15.2% in Newton County to a low of −28.81% in Decatur County.

Exhibit 14
Return on Equity



The return on equity county quartiles are displayed on the map in **Exhibit 14.** Clusters of counties with high ROEs are in the east-central portion, the southwestern corner and the south-central portion of Indiana. Counties with low profitability are clustered in the north-central portion of the state and along the Ohio border, down to the southeastern portion of the state.

Comparing this distribution of profitability to the distribution of lending activity yields no single sure way to predict profitability success. There is little correlation between bank ROE and the loan-to-deposit ratios; the porportion of loans or securities has little effect. Similarly, the types of loans in the portfolio have little effect as well; C&I loans or retail loans may lead to high or to low profitability.

Several interesting inferences can be drawn from an examination of this profitability distribution in conjunction with the distribution of the number of banks and the type of banking regulation in the surrounding states. Exhibit 14 depicts a large cluster of high ROE counties in the western portion of the state and Exhibit 7 shows a similar cluster of counties in this part of the state having a small number of banks. The high ROE counties clustered along the Ohio River in the center of the state also were counties with a small number of banks. The basic economic principle that low competition creates an opportunity to earn greater than normal profits is supported by these data.

This argument about profitability can be strengthened by considering the geographic and political boundaries of the area. The southern border of the state along the Ohio River has limited access to Kentucky in Vanderburgh, Spencer, Floyd, and Clark counties. The Kentucky banking laws are similar to Indiana's; banks cannot branch outside of their home county. The only Indiana counties along the river that are not in the highest ROE category are Spencer, which is across the river from Owensboro, and Floyd and Clark counties, which are across from Louisville. Recall also that Floyd and Clark counties were high in the proportion of deposits greater than $100,000. This is another indication that they are having to compete more aggressively with the larger Louisville banks. Thus, the high ROE counties not only lack competition within the county but are protected from competition from the neighboring state.

Similar conclusions can be drawn in the western edge of the state. Exhibit 7 shows a concentration of counties with a small number of banks in this part of the state and Exhibit 14 identifies a concentration of high ROE counties in this same area. For the southern third of the state, the western boundary is the Wabash River, with the similar geographic shielding effects that were noted along the Ohio River.

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In addition, all of these western counties border Illinois, which, until very recently, was a unit banking state, allowing only the home office and no branches. This form of branching regulation is the most restrictive and is a definite impediment to competition. Thus, the counties bordering Illinois to a large extent have been protected from competition across the border by both physical boundaries and regulatory impediments to competition. In addition, they face little competition within their own county. The result is that this area contains some of the most profitable banks in Indiana.

A different pattern exists in the northern and eastern parts of Indiana, which contain several low ROE counties. There are no physical impediments to competition since there are no natural geographic boundaries and both Ohio and Michigan have fairly liberal banking regulations with regard to both branching and holding companies. In addition, the proportion of the deposits raised by jumbo CDs in the northern tier of counties is among the highest in the state, which is indicative that they are responding to aggressive competition.

The above evidence reveals that the counties containing large cities tend to have fewer banks per capita than the more rural counties. Also, the banks in these urban counties are more aggressive in the raising of deposits and tend to loan out a larger proportion of their deposits. There is, however, no clearly discernible pattern to the types of loans that are made. Banks that are relatively protected from outside competition, either by natural or political barriers, or that operate in counties with few banks, tend to be among the more profitable in the state. Thus, it appears that restrictions on the competition faced by Indiana banks have little effect on the types of services provided but, rather, lead to greater returns on equity for the owners of the banks.

Part III: Comparison with States with Other Regulations

State banking regulations have substantial control over the form of banking organization and the geographic distribution of banks within the state. This control extends to nationally charted banks as well as to state banks because the McFadden Act requires that national banks also adhere to the restrictions specified by state regulation. Different philosophies of regulation are apparent among the states in two key areas: the extent of branching allowed and the type of holding company organization permitted.

For this study, branching regulations are categorized as dense, moderate, and thin. Dense branching occurs in those states allowing statewide branching and branching over a large multi-county area. A moderate branching regulation permits branching over a county-wide area or a limited multi-county area whereas thin branching regulation places strict limits on the number of branches allowed. The most restrictive of the branching regulations is in unit banking states, where no branches are allowed.

The organizational structure of a bank is controlled by the given state's regulations concerning bank holding companies. Some states allow multi-bank holding companies (MBHC) which enables a more flexible organization structure than the one-bank holding companies permitted in other states.

The characterization of branching and holding company regulations for the states included in this study are shown in **Table 11**. These states offer a cross-section of banking regulations, geographic dispersion, and economic vitality. Four states are considered to have dense branching, six moderate, and six thin. All of the dense branching states allow MBHCs, while two of the moderate and two of the thin branching states do not allow MBHCs. It must be pointed out that this is not an exhaustive sampling of all of the states and any conclusions regarding the impact of these regulations must be qualified.

Deposit Activity

The deposit activity of the states shown in Table 11 indicates that the deposits per capita are unrelated to the type of branching allowed. The highest deposits per capita exist in the states with thin branching, while the lowest exist in the states with moderate branching. This relationship is unchanged even if Illinois, with several large banks and the highest deposits per capita of any of the states examined, is excluded from the average. Also, the states that do not allow MBHCs have higher average deposits per capita than is true for those that do. Excluding Illinois from the sample would equate the averages for the two groups.

The conclusions are quite different for the ratio of the number of banks per million population. The range is from less than 12 banks per million people in North Carolina to more than 206 banks per million people in Montana. The average number of banks per million clearly increases as branching restrictions are tighter, with 18 banks, 62 banks, and 140 banks per million population, respectively, for the dense, moderate, and thin branching categories. It must be kept in mind that the number of banks is not the same as the number of banking offices. Clearly, the banks in the dense branching states would have the greatest number of branches or bank offices in the state. In addition, the number of banks per million population is greater for states not allowing MBHCs than for states that do allow them: 109 versus 70 banks per million population. However, since the states allowing dense branching were classified as allowing MBHCs, the average for the number of banks is unduly affected by these dense branching states. The average for the states that allow MBHCs and have either moderate or thin branching regulations is 113 banks per million population. Thus, existence of bank holding companies does not in itself exert a great influence on the number of banks serving the population of the state.

Since the amount of deposits is expected to be related to the level of economic activity in a state, the deposits per capita were adjusted by dividing by the personal income per capita. This ratio has approximately the same value for dense and moderate branching states and had a slightly higher value for thin branching states. This ratio was somewhat higher for states not allowing MBHCs than for those that do allow them, although there was considerable variation among the states within each classification.

The final aspect of deposit activity examined was the percentage of the deposits greater than $100,000. The average was 6.5% for the dense branching states, 4.8% for the moderate, and 5.5% for the thin. However, the variation within categories is so high that the averages are insignificant. The states not allowing MBHCs had a lower average of deposits over $100,000, 6.2%, versus 3.6% for those without MBHCs, and were much more tightly clustered than was true for those with MBHCs.

From this evidence we conclude that both the branching restrictions and the existence of MBHCs appear to have little determinable impact on the deposit activity in the states sampled. The restrictions do, however, appear to affect the relative number of different banks that operate in the state, with the more restrictive branching regulation contributing to a larger number of banks. However, as we said earlier, the restrictions to county-wide branching in Indiana in many cases limit the number of banks in a county to 2 or 3. It is highly possible that with a denser branching network allowed, the population for any given area might have a greater number of banks to choose from, even though there would be fewer banks in the state.

Loans and Securities

The data for the loan and security portfolios for banks in the sample states are shown in **Table 12**. The loan-to-deposit ratios show a clear, increasing trend as branching is less restrictive, that is, with 65.6% for dense, 60.9% for moderate, and 59.8% for thin. Similarly, the existence of MBHCs is positively correlated with the loan-to-deposit ratio, but the relationship is less pronounced.

The nature of the branching allowed does not appear to have a substantial impact on the willingness of the banks to provide C&I loans. The states with thin

Table 11

States Compared by Structure and Deposit Activity

State	*Branch category*	*MBHC allowed*	*Deposits per capita*	*Banks per capita*	*Deposits/ pers inc*	*Deposits >$100,000*
California	Dense	Yes	8,633	12.89	0.71	14.9%
Connecticut	Dense	Yes	3,813	18.19	0.29	6.9%
North Carolina	Dense	Yes	3,704	11.93	0.43	4.1%
Pennsylvania	Dense	Yes	6,347	29.48	0.61	0.1%
Massachusetts	Moderate	Yes	5,182	23.90	0.46	10.7%
Mississippi	Moderate	Yes	4,270	67.17	0.59	6.9%
Ohio	Moderate	Yes	4,239	35.15	0.41	0.5%
Tennessee	Moderate	Yes	4,608	76.11	0.54	6.0%
Colorado	Thin	Yes	4,944	114.67	0.44	9.1%
Missouri	Thin	Yes	6,019	147.34	0.61	0.4%
Texas	Thin	Yes	7,776	103.14	0.72	8.5%
Montana	Thin	Yes	6,209	206.81	0.64	5.7%
Kentucky	Moderate	No	4,850	93.66	0.57	2.0%
Indiana	Moderate	No	5.167	74.08	0.54	2.7%
Illinois	Thin	No	10,449	109.23	0.91	3.3%
Oklahoma	Thin	No	7,606	161.61	0.74	6.3%
Averages:						
Dense branching			5,624	18.12	0.51	6.5%
Moderate branching			4,719	61.68	0.52	4.8%
Thin branching			7,167	140.47	0.68	5.5%
MBHC allowed			5,479	70.57	0.54	6.1%
No MBHC			7,018	109.65	0.69	3.6%

Table 12

Loan and Security Data for Comparison States

State	*Loans-to-deposits*	*C&I loans as a*		*Retail loans as a*		*Farm loans as a*		*Securities as a*	
		% loans	*% dep*	*% loans*	*% dep*	*% loans*	*% dep*	*% assets*	*% dep*
California	72.4%	38.4%	29.4%	46.9%	36.0%	0.2%	1.7%	8.1%	10.1%
Connecticut	69.8%	33.1%	23.5%	64.7%	45.9%	0.2%	0.1%	18.2%	22.4%
North Carolina	59.3%	38.4%	24.4%	54.9%	34.9%	1.6%	1.0%	21.9%	29.0%
Pennsylvania	60.7%	36.2%	24.2%	50.8%	34.0%	0.6%	0.4%	23.6%	30.6%
Massachusetts	66.5%	49.7%	32.0%	40.1%	25.8%	0.5%	0.3%	16.9%	22.5%
Mississippi	55.6%	26.3%	14.9%	66.5%	37.9%	5.4%	3.1%	30.8%	36.4%
Ohio	61.3%	29.8%	18.6%	67.1%	41.9%	1.8%	1.1%	25.2%	32.8%
Tennessee	62.5%	32.1%	19.5%	62.7%	38.2%	2.5%	1.5%	24.1%	29.6%
Colorado	66.6%	35.5%	24.9%	54.8%	38.4%	7.1%	4.9%	16.7%	20.8%
Missouri	60.5%	31.8%	19.2%	52.6%	31.8%	7.3%	4.4%	24.8%	32.1%
Texas	55.3%	51.3%	33.3%	39.3%	25.4%	3.3%	2.1%	19.6%	24.5%
Montana	61.1%	30.8%	19.0%	53.3%	32.9%	17.9%	11.1%	26.0%	30.3%
Kentucky	57.2%	27.2%	16.0%	65.6%	38.5%	5.2%	3.0%	26.2%	32.5%
Indiana	62.5%	23.8%	14.4%	67.6%	40.9%	5.5%	3.4%	27.6%	33.7%
Oklahoma	58.7%	40.9%	24.6%	44.5%	26.8%	9.1%	5.5%	24.2%	28.4%
Averages:									
Dense branching	65.6%	36.5%	25.4%	54.3%	37.7%	0.7%	0.8%	17.9%	23.0%
Moderate branching	60.9%	31.5%	19.2%	61.6%	37.2%	3.5%	2.1%	25.1%	31.3%
Thin branching	59.8%	39.8%	26.1%	46.1%	29.8%	7.9%	5.0%	21.4%	26.4%
MBHC allowed	62.6%	36.1%	23.6%	54.5%	35.3%	4.0%	2.7%	21.3%	26.8%
No MBHC	58.8%	35.2%	22.7%	52.4%	32.5%	5.6%	3.4%	23.7%	29.2%

branching have the largest percentage of their loans in this category (39.8%) and the moderate the least (31.5%). However, the thin branching states have the greatest range: Texas is highest with 51.3% of the loans, and Montana the lowest with 30.8% of the loans. Three states which are generally thought of as encouraging entrepreneurial development—Massachusetts, Texas, and Illinois—allocate about one-half of their total loans to C&I loans. There does not appear to be any significant difference in the proportion of C&I loans by holding company classification. The relative amount of C&I loans for the several states suggests that this category of loan is more a function of some characteristic, perhaps economic-activity-generated demand for loans, than it is a function of the banking structure in the state.

The retail loans make up a substantially higher proportion of the loan portfolio for the moderate branching states, with 61.6% of their loans in retail loans versus 54.3% for the dense branching states and 46.1% for the thin. The existence of MBHCs seems to have no effect on the level of retail loans in the state.

Dense branching states have the least commitment to farm loans (.72%), the moderate branching states a greater commitment (5.5%), and the thin branching states the greatest (7.9%). If Montana, with almost 18% of its loans in farm loans, is excluded from calculating the average for the thin branching states, farm loans still constitute 5.9% of the loans of the remaining thin branching states. There is virtually no difference when the states are classified along holding company lines.

The allocation of funds to securities by branching category is, as expected, the reverse of that for loans. Securities as a percentage of assets average 17.9% for the dense branching states, 25.1% for the moderate, and 21.4% for the thin. The existence of MBHCs appears to have no effect on the proportion of the assets which are allocated to securities.

Dense branching corresponds to a higher loan-to-deposit ratio and a lower proportion of farm loans. Moderate branching corresponds to a higher proportion of retail loans and to a high proportion of the assets held in securities. Thin branching corresponds to the lowest loan-to-deposit ratio. There is no clear relationship between type of branching and the allocation of funds to C&I loans. The existence of MBHCs is positively related to the loan-to-deposit ratio, but exerts no difference in the allocation of funds to the various loan categories.

Table 13

Net Federal Funds Activity
For Comparison States

State	*Sold (purch)*	*% Dep*
California	−5,731	−2.7%
Connecticut	−934	−7.8%
North Carolina	−1,737	−7.9%
Pennsylvania	−5,996	−8.0%
Massachusetts	−3,134	−10.5%
Mississippi	180	1.7%
Ohio	−3,167	−6.9%
Tennessee	−502	−2.4%
Colorado	−503	−3.4%
Missouri	−450	−1.5%
Texas	−4,819	−4.2%
Montana	106	2.2%
Kentucky	546	3.1%
Indiana	−537	−1.9%
Illinois	−10,908	−9.1%
Oklahoma	664	2.8%
Averages:		
Dense branching	3,600	−6.6%
Moderate branching	−1,102	−2.8%
Thin branching	−2,652	−2.2%
MBHC allowed	−2,224	−4.3%
No MBHC	−2,559	−1.3%

Federal Funds

The fed funds activity of the states examined is shown in **Table 13.** The averages for all of the groups is a negative net fed funds position, that is, they were net borrowers in the fed funds market. The states with dense branching were the most aggressive borrowers with a net purchase of 6.6% of deposits whereas the other two branching groups purchased between 2% and 3% of deposits. The states that allowed MBHCs were more active borrowers with purchases of 4.3% of deposits versus 1.3% for those states not allowing MBHCs.

Table 14

Profitability of Banks
In Comparison States

State	*ROA*	*ROE*
California	0.96%	9.6%
Connecticut	1.04%	14.3%
North Carolina	1.04%	11.4%
Pennsylvania	1.00%	11.9%
Massachusetts	1.06%	15.3%
Mississippi	1.23%	14.6%
Ohio	0.96%	11.1%
Tennessee	0.91%	11.3%
Colorado	1.52%	16.3%
Missouri	1.14%	13.6%
Texas	1.51%	17.4%
Montana	1.16%	14.9%
Kentucky	1.15%	13.0%
Indiana	0.79%	9.5%
Illinois	0.97%	11.5%
Oklahoma	1.57%	18.2%
Averages:		
Dense branching	1.01%	11.8%
Moderate branching	1.02%	12.4%
Thin branching	1.31%	15.3%
MBHC allowed	1.13%	13.5%
No MBHC	1.12%	13.0%

Bank Profitability

The data for the returns on assets and equity given in **Table 14** indicate very little difference between the dense and the moderate branching states. The return on assets is approximately 1% for both while the return on equity averages 11.8% for dense branching and 12.4% for moderate. The thin branching states averaged a return on assets of 1.31% and a return on equity of 15.3%. The variation within the branching categories was quite small with the exception of Indiana, which recorded the largest differences below the moderate group average. Apparently, restrictive branching regulations lowers competition and permits a corresponding increase in the profitability of the banks. Interestingly, the status of the state with regard to holding companies appears to have no effect on the profitability of the banks.

The banking regulation that seems to exert the most influence on operating performance and characteristics is that of controlling bank branching. The number of banks operating in a state is greatly influenced by branching regulation whereas the deposit activity and lending activity is not. Restrictive branching regulations are, as expected, positively related to bank profitability. In virtually all areas, the existence of multi-bank holding companies did not affect banking performance or characteristics.

It must be remembered that the results noted in this section are derived from a non-exhaustive sampling of states employing the various regulations. Thus, the robustness of our conclusions have not been assessed and they remain, therefore, subject to revision upon further investigation.

Indiana banks have been shown to be less aggressive in raising deposits and in making loans. The loans that they do make tend to be more concentrated in retail and agricultural loans and less concentrated in commercial and industrial loans than their peers in other states. It was also seen that while there are more banks per capita in Indiana, because of the county branching restrictions people in many counties see little in the way of local bank competition. Where counties are protected by natural boundaries and face little outside competition, banks are seen to provide higher returns to the shareholders. Finally, from the investigation of branching and MBHC regulations in other states, it appears that cross-county branching would likely have a greater impact on the local banking environment than would allowing MBHCs. ☐

County Level Personal Income During the Great Recession

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Now that it is over, we can look back on the period from 1979 to 1982 and accept it as "The Great Recession." Data just released by the Bureau of Economic Analysis in the U.S. Department of Commerce details how each Hoosier county was struck by this major economic force. **Table 1** (see next page) provides the basic data of personal income and per capita personal income for each county, in current dollars, before adjustment for inflation.

From 1979 through 1982, the state's personal income grew by 18.85% compared with the nation's more robust 32.28% growth. Had Indiana just kept pace with the nation during these years, Indiana's personal income in 1982 would have been $6.2 billion (or 11.3%) higher than the $54.8 billion actually attained.

Indiana's per capita personal income increased from $8,428 to $9,994 (18.58%) from 1979 to 1982. Again, had the state not been so adversely affected by this recession and kept pace with the nation, per capita personal income would have grown to $10,806 in 1982. Hence, on average, the state's slower growth during the recession cost each Hoosier $812 in 1982 alone.

Statewide averages, however, hide the great diversity of experience within the Hoosier state. From 1979 to 1982, Jefferson county surpassed the national rate of growth in personal income and led the state with 41.3% growth. This was due, in large measure, to the construction work at Marble Hill, now suspended. Jefferson was the only Indiana county to exceed the nation in growth of personal income during the recession. **Table 2** shows the five counties which led the state in growth of personal income from 1979 to 1982 and the five which had the slowest growth. In general, suburban counties were leaders and rural counties were trailers.

Table 2

Leaders and Trailers—Percent Change in Personal Income, 1979 to 1982

Rank	*County*	*% Change 1979-1982*
1	Jefferson	41.3
2	Monroe	31.2
3	Jasper	28.5
4	Clark	27.5
5	Warrick	27.1
92	Benton	2.9
91	Warren	6.1
90	Randolph	9.2
89	Howard	9.5
88	Tipton	9.7

Table 3

Richest and Poorest Indiana Counties, 1982 as Measured by Per Capita Personal Income

Rank	*County*	*1982 Dollars*
1	Hamilton	11,750
2	Marion	11,718
3	Vanderburgh	11,488
4	Benton	10,799
5	Lake	10,657
6	Allen	10,655
7	Howard	10,646
8	Hancock	10,641
9	St. Joseph	10,573
10	Pike	10,528
92	Crawford	6,448
91	Washington	6,474
90	Switzerland	6,579
89	Owen	6,656
88	Franklin	6,874
87	Jennings	6,941
86	Lagrange	6,969
85	Orange	7,002
84	Brown	7,117
83	Starke	7,180

Per Capita Personal Income

Hamilton county now can claim to be the leader in per capita personal income among the state's 92 counties. At $11,750, Hamilton is 17.6% above the statewide level of $9,994. Crawford is the poorest county at $6,448, 35.5% below the state figure. Hamilton moves up from second place behind 1979 leader Benton county, which has fallen to fourth place behind Marion and Vanderburgh counties.

Back in 1979 Indiana had 17 counties with per capita personal income above the nation's $8,657. By 1982, only three Hoosier counties (Hamilton, Marion, and Vanderburgh) exceeded the nation's

Table 4

Percent Change in Per Capita Personal Income—1979 to 1982

Rank	*County*	*Percent Change 1979-1982*
4	Clark	26.62
5	Monroe	25.99
8	Vanderburgh	25.06
10	St. Joseph	23.81
12	Kosciusko	22.60
14	Marion	22.52
15	Tippecanoe	22.23
22	Floyd	21.40
30	Delaware	19.68
33	Hamilton	19.05
37	Vigo	18.58
41	Wayne	18.39
42	Johnson	18.38
43	Grant	18.18
44	LaPorte	18.13
46	Elkhart	18.03
52	Madison	16.93
56	Hendricks	16.38
57	Allen	16.28
65	Lake	14.85
75	Bartholomew	13.67
83	Howard	12.09
89	Porter	9.53

$11,100. **Table 3** shows the rank order of Indiana's richest and poorest counties in terms of per capita personal income.

Table 4 shows the ranking of some of the state's most populous counties in terms of per capita personal income growth from 1979 to 1982. The three leading counties in the state were Jefferson (46.7%), Ohio (29.7%), and Martin (28.2%). Per capita figures can be misleading, however, since one must consider both the numerator (personal income) and the denominator (population). In a fast-growing county, particularly one adding many children, per capita income may grow slowly, as in the case of Porter county which ranked eighty-ninth in the state. A county with declining population might turn up as a leader in per capita growth.

With the recession past, attention will now focus on the record of growth beginning in 1982. The vigorous economic development efforts of many communities and of the state government will influence the data for 1983 and beyond. The extent to which those efforts will be statistically separable from the cyclical upturn and from other trends will be of interest to economist and politicians alike. ☐

Personal Income: By County, and Indiana and U.S. Totals

	Personal Income (Millions)		*Percent Change*		*Per Capita Personal Income ($)*		*Percent Change*
				Annual Average			
	1979	*1982*	*'79-'82*	*'59-'82*	*1979*	*1982*	*'79-'82*
County							
Adams	249.5	286.6	14.87	8.60	8415	9725	15.57
Allen	2695.8	3100.5	15.01	7.58	9163	10655	16.28
Bartholomew	591.7	679.2	14.79	8.15	9229	10491	13.67
Benton	106.3	109.4	2.92	8.42	10185	10799	6.03
Blackford	116.5	131.8	13.13	7.29	7467	8573	14.81
Boone	326.9	391.8	19.85	8.98	9147	10323	12.86
Brown	71.0	87.7	23.52	9.76	5893	7117	20.77
Carroll	165.7	184.3	11.23	8.40	8425	9334	10.79
Cass	352.6	392.3	11.26	7.52	8643	9729	12.57
Clark	671.0	855.4	27.48	9.00	7569	9584	26.62
Clay	195.4	229.8	17.60	8.04	7906	9481	19.92
Clinton	274.4	321.5	17.16	8.10	8784	10082	14.78
Crawford	51.9	62.9	21.19	7.91	5384	6448	19.76
Daviess	186.7	236.0	26.41	8.39	6874	8214	19.49
Dearborn	238.1	296.1	24.36	7.64	7073	8450	19.47
Decatur	190.5	220.6	15.80	8.72	7924	9189	15.96
DeKalb	274.5	307.1	11.88	7.80	8291	9299	12.16
Delaware	960.8	1124.2	17.01	7.23	7470	8940	19.68
Dubois	270.9	343.8	26.91	9.37	8024	10036	25.07
Elkhart	1216.7	1441.1	18.44	7.96	8901	10506	18.03
Fayette	215.5	252.8	17.31	8.37	7717	9084	17.71
Floyd	473.9	593.3	25.20	8.06	7830	9506	21.40
Fountain	145.5	166.5	14.43	7.45	7413	8745	17.97
Franklin	113.8	140.5	23.46	8.86	5932	6874	15.88
Fulton	145.5	165.1	13.47	7.79	7551	8525	12.90
Gibson	273.5	346.6	26.73	9.14	8272	10074	21.78
Grant	654.2	747.0	14.19	7.09	8057	9522	18.18
Greene	192.4	243.7	26.66	8.35	6318	7926	25.45
Hamilton	796.3	993.4	24.75	10.38	9870	11750	19.05
Hancock	391.4	466.7	19.24	9.55	9066	10641	17.37
Harrison	177.2	223.7	26.24	9.71	6593	7815	18.53
Hendricks	603.8	740.1	22.57	9.48	8879	10333	16.38
Henry	420.0	460.8	9.71	7.55	7831	8917	13.87
Howard	829.3	908.4	9.54	7.83	9498	10646	12.09
Huntington	304.2	343.0	12.75	7.52	8490	10029	18.13
Jackson	288.8	336.7	16.59	8.46	8023	9016	12.38
Jasper	199.2	255.9	28.46	9.51	7821	9522	21.75
Jay	178.1	200.7	12.69	7.07	7530	8934	18.65
Jefferson	200.5	283.3	41.30	9.38	6625	9718	46.69
Jennings	131.2	157.9	20.35	8.97	5748	6941	20.76
Johnson	620.5	777.9	25.37	9.24	8250	9766	18.38
Knox	319.0	398.8	25.02	8.57	7675	9381	22.23
Kosciusko	461.5	577.1	25.05	9.08	7866	9644	22.60
LaGrange	156.1	181.5	16.27	8.96	6107	6969	14.11
Lake	4923.4	5481.7	11.34	7.05	9279	10657	14.85
LaPorte	917.8	1078.0	17.45	7.65	8410	9935	18.13
Lawrence	311.5	370.6	18.97	8.29	7372	8938	21.24
Madison	1137.7	1293.6	13.70	7.05	8175	9559	16.93
Marion	7349.3	9042.3	23.04	7.17	9564	11718	22.52
Marshall	316.0	368.1	16.49	8.14	8202	9254	12.83
Martin	69.9	86.3	23.46	7.75	6245	7926	26.92
Miami	285.7	327.4	14.60	7.03	7111	8657	21.74
Monroe	601.6	789.5	31.23	9.27	6194	7804	25.99
Montgomery	292.4	333.1	13.92	7.76	8207	9416	14.73
Morgan	409.4	492.3	20.25	9.68	7995	9346	16.90
Newton	103.9	122.8	18.19	8.55	7258	8127	11.97

Personal Income: By County, and Indiana and U.S. Totals

	Personal Income (Millions)		*Percent Change*		*Per Capita Personal Income ($)*		*Percent Change*
	1979	*1982*	*'79-'82*	*Annual Average '59-'82*	*1979*	*1982*	*'79-'82*
Noble	269.0	306.5	13.94	8.44	7608	8678	14.06
Ohio	29.2	37.1	27.05	8.60	5589	7248	29.68
Orange	108.5	130.4	20.18	7.92	5909	7002	18.50
Owen	85.5	105.8	23.74	8.93	5369	6656	23.97
Parke	108.0	127.4	17.96	8.34	6666	7603	14.06
Perry	120.9	144.3	19.35	7.53	6222	7561	21.52
Pike	114.6	141.0	23.04	9.39	8593	10528	22.52
Porter	1096.3	1273.1	16.13	9.76	9443	10343	9.53
Posey	203.2	244.2	20.18	9.17	7900	9082	14.96
Pulaski	113.7	125.5	10.38	9.10	8677	9497	9.45
Putnam	206.6	247.4	19.75	7.97	7205	8371	16.17
Randolph	234.2	255.8	9.22	7.41	7774	8800	13.20
Ripley	174.6	214.9	23.08	8.80	7123	8675	21.79
Rush	154.4	174.5	13.02	8.01	7823	9184	17.40
St. Joseph	2067.8	2536.5	22.67	6.95	8540	10573	23.81
Scott	127.7	149.8	17.31	9.36	6247	7397	18.41
Shelby	322.5	375.9	16.56	7.92	8076	9406	16.47
Spencer	141.6	175.7	24.08	10.54	7317	8758	19.69
Starke	137.6	153.7	11.70	7.51	6262	7180	14.66
Steuben	179.2	215.0	19.98	9.34	7209	8723	21.00
Sullivan	162.6	192.8	18.57	8.20	7742	9215	19.03
Switzerland	38.8	48.7	25.52	6.83	5593	6579	17.63
Tippecanoe	929.1	1157.7	24.60	8.62	7640	9338	22.23
Tipton	144.9	159.5	10.08	7.65	8570	9820	14.59
Union	51.6	59.0	14.34	8.37	7455	8636	15.84
Vanderburgh	1525.4	1923.6	26.10	8.05	9186	11488	25.06
Vermillion	122.8	151.3	23.21	8.05	6848	8413	22.85
Vigo	873.3	1045.9	19.76	7.76	7885	9350	18.58
Wabash	293.4	331.1	12.85	7.94	8098	9346	15.41
Warren	70.6	74.9	6.09	7.82	7822	8196	4.78
Warrick	331.6	421.6	27.14	11.05	8075	9579	18.63
Washington	125.8	145.3	15.50	7.94	5828	6474	11.08
Wayne	593.6	690.7	16.36	6.70	7775	9205	18.39
Wells	230.0	263.9	14.74	8.70	8996	10493	16.64
White	281.4	249.4	14.19	9.30	9343	10399	11.30
Whitley	217.2	241.0	10.96	8.48	8409	9248	9.98
Indiana	46141.1	54839.9	18.85	7.85	8428	9994	18.58
United States	1,944,000.0	2,571,500 0	32.28	8.64	8657	11100	28.22

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Mid-Year Outlook Edition

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In this issue:

The mid-year outlook for business in the nation and the state is a regular feature of this publication. Once again we offer an update of our annual forecast (published at the end of the year) with reflections on and information about the progress of business thus far this year.

For each of our writers this task comes just after grading final examinations and term papers. From the role of judge they move to the persona of seer. Their success in making this transformation is continuing testimony to the excellence of our Hoosier academic community. The success of their forecasts, however, depends on whether the behavior of businesses and consumers does in fact conform to the predictions on these pages.

M.J.M.

Indiana Business Review

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1984: Looks Like a Banner Year

R. Jeffery Green

Professor of Economics, Indiana University, Bloomington

The recovery is now eighteen months old. Since a typical recovery, if there is such a thing, lasts somewhat over forty months, the current recovery is still quite young. At this early point in the recovery, we would expect vigorous growth and little in the way of inflationary pressures. In those respects this recovery has been very predictable, since growth has been strong and inflation remains quite moderate. Indeed, the first half of 1984 has seen the greatest concentration of good news in over five years and the forecast discussed below indicates all of 1984 will be a banner year. Yet some early warning signs indicate there may be problems by 1985.

Some, but not all, of the good news in the first half of 1984 was anticipated in our outlook last November. We expected real GNP to grow at an annual rate of about 4.5% during the four quarters of 1984. In the first two of those, real GNP actually rose at an annual rate of about 7.7% so that the recovery was stronger than expected. Both the auto and housing sectors came in stronger than anticipated and inventory restocking also gave a boost to the economy early in the year.

The rapid economic growth in the first half of the year brought with it two predictable consequences. The first was a sharp decline in unemployment. The rapid growth led to worker recalls as firms expanded production to meet greater demand. As a result the unemployment rate fell to 7.5% by May, a level we did not expect to reach until year-end. The second consequence of the rapid growth was a rise in interest rates. We had expected rates to rise with the increased loan demand which accompanies a recovery. The greater than expected growth led to even greater loan demand and hence larger increases in interest rates. By June, Treasury bills were over 100 basis points above December levels, as were corporate bonds. The prime rate had risen 200 basis points over the same period.

The faster growth might have been expected to also produce markedly higher inflation rates. In fact, inflation remained moderate. The Consumer Price Index rose at an annual rate of less than 5% in the first half of the year, much as we had predicted last November. This moderate inflation pattern reflected good productivity growth and small wage increases which combined to produce only slight increases in labor costs and, hence, little upward pressure on prices.

Given the strong recovery in the first half of 1984, what is likely to happen for the remainder of the year? We believe the long-awaited slowdown in the pace of the recovery will finally arrive. Real GNP is expected to grow at a rate of about 5% over the second half of the year. This would produce a growth rate from the fourth quarter of 1983 to the fourth quarter of 1984 of 5.7%, somewhat above last November's forecast of 4.5% growth for the same period.

The economic growth in the second half of the year will be spread among a number of industries. Housing and autos, which led the recovery, will remain strong. Housing starts are beginning to show some weakness, but there is a lag between starts and the value of construction put in place so housing investment will likely not soften until 1985. Other durable goods expenditures are also growing rapidly despite recent increases in interest rates.

The consumer will not be the only source of growth in the latter half of 1984. Defense purchases continue to rise at rapid rates and business expenditures for plant and equipment are starting to increase quickly. These investment expenditures are fueled by an increase in capacity utilization rates which has provided a reason to invest and a rise in after-tax corporate profits of 34% from the first quarter of 1983 to the first quarter of 1984, which has provided the resources for expanded investment.

Some weaker sectors of the economy remain. State and local government purchases of goods and services will expand slowly and the trade balance will not show much improvement. It is likely that the trade deficit will not improve until the dollar depreciates in world currency markets and that in turn will have to await a decline in interest rates.

We believe interest rates will continue to rise in the second half of the year but not nearly as rapidly as in the first half of

1984. This reflects somewhat slower expected growth for the rest of the year, meaning that loan demand should rise less rapidly. If the Federal Reserve maintains the growth in the monetary aggregates within current target ranges, it is likely that there will only be moderate upward pressure on interest rates which would push the Treasury bill rate to something like 11% by year-end.

The unemployment rate should continue to drop throughout the year, perhaps nearing 7% by December. That would be the lowest rate since early 1980 but would still imply significant slack in labor markets. High unemployment rates have produced very moderate wage settlements so far in 1984, much as we expected. Compensation per hour has been rising at a rate of slightly over 4% and, with one qualification, we expect wages to rise no more rapidly for the remainder of 1984. The qualification concerns the labor negotiations between the United Auto Workers and the major automobile manufacturers. This settlement can act as a pattern for other major negotiations and the ill-advised and widely-publicized bonuses to executives do not inspire confidence that costs will be controlled. So long as the growth in labor costs remains moderate, inflation should hold in the 4 to 5% range.

In summary, 1984 looks like a terrific year. Real GNP for the year should be more than 6% above its 1983 level, inflation will remain modest and the unemployment rate should show a decline of about 2 full percentage points. These are all major accomplishments and should be savored, both because they represent such outstanding performance and because it may be some time before they are matched.

It will be difficult for the economy to maintain such momentum in 1985 in the face of continuing high deficits which will likely lead to more restrictive fiscal policy, rising interest rates which may weaken durable consumer and investment spending later, and a number of international problems ranging from the high value of the dollar to foreign debt problems and war in the Persian Gulf.

But those problems are for 1985; in the meantime enjoy 1984 for the banner year that it is. ☐

A Mid-Year Review of the Indiana Economy in 1984

Richard L. Pfister

Professor of Urban Economics, Indiana University School of Business

The recovery of the Indiana economy in 1984 is now anticipated to be stronger than we had expected in the November-December 1983 issue of the *IBR*. We now expect the increases in personal income and employment to be somewhat greater than we had previously forecast. The primary reason for this stronger recovery is that the national recovery has been more vigorous than had been anticipated.

The major changes in our revised 1984 forecast for the Indiana economy are the following:

- Indiana's nominal personal income for 1984 will be 10.5% greater than in 1983, rather than 7.8% greater as forecast last December;
- Real personal income for 1984 will be up 6.3% instead of 3.5%;
- Total employment will rise by 4.2% over 1983 compared to the rise of 3.7% in the previous forecast.

The year 1984 will be a good one for the Indiana economy. The growth in real personal income will be the strongest (up 6.3%) Indiana has enjoyed for quite a few years. We have to go back to 1973 to find a larger increase, and the projected increase for 1984 is the second largest since 1968. Nominal personal income grew faster in 1978 and 1979, but inflation was much greater then than it is in 1984. As a result, real personal income is forecasted to grow faster in 1984 than it did in 1978 and 1979 when the growth rates were 4.7% and 2.2% respectively.

Total employment in Indiana is forecasted to grow by 4.2% in 1984, reversing a string of four years with declines. The employment growth in 1984 will be the greatest since 1977. Total employment in 1984 will increase by 93,000 jobs over 1983. Even so, the total will still be 175,000 below the 1979 peak.

Employment in durable manufactures, which was severely depressed, will come back strongly in 1984. Our forecast is for employment in durables to be higher by 8.2% in 1984 than in 1983. Employment in durable goods manufactures declined by 25% between 1979 and 1983. We will not soon get back to the 1979 peak, but 1984 shows that Indiana's smokestack industries are by no means dead. Employment growth will be strong in nonelectrical machinery and in autos and parts although all categories of durables will show increases. Employment in nondurable manufactures will grow by 5.1% in 1984, with chemicals and paper products leading the way.

Table 1

Summary of Quarterly 1984 Forecast
Econometric Model of Indiana

	1983:4	*1984:1*	*1984:2*	*1984:3*	*1984:4*
Personal Income[1]	60608	62577	62969	64456	65926
Percent Change (AR)[2]	13.1	13.6	2.5	9.8	9.4
Real Personal Income[3]	28046	28731	28557	28891	29222
Percent Change (AR)	10.2	10.1	−2.4	4.8	4.7
Manufacturing Employment[4]	589.6	601.2	622.8	631.1	635.9
Durables	433.5	443.7	462.1	467.2	471.3
Nondurables	156.1	157.6	160.8	163.9	164.7
Nonmanufacturing Employment	1444.5	1410.5	1454.8	1463.0	1484.8
Total Employment[5]	2261.4	2229.3	2315.2	2329.2	2348.2
Percent Unemployed (SA)	10.3	10.4	10.2	9.8	9.1

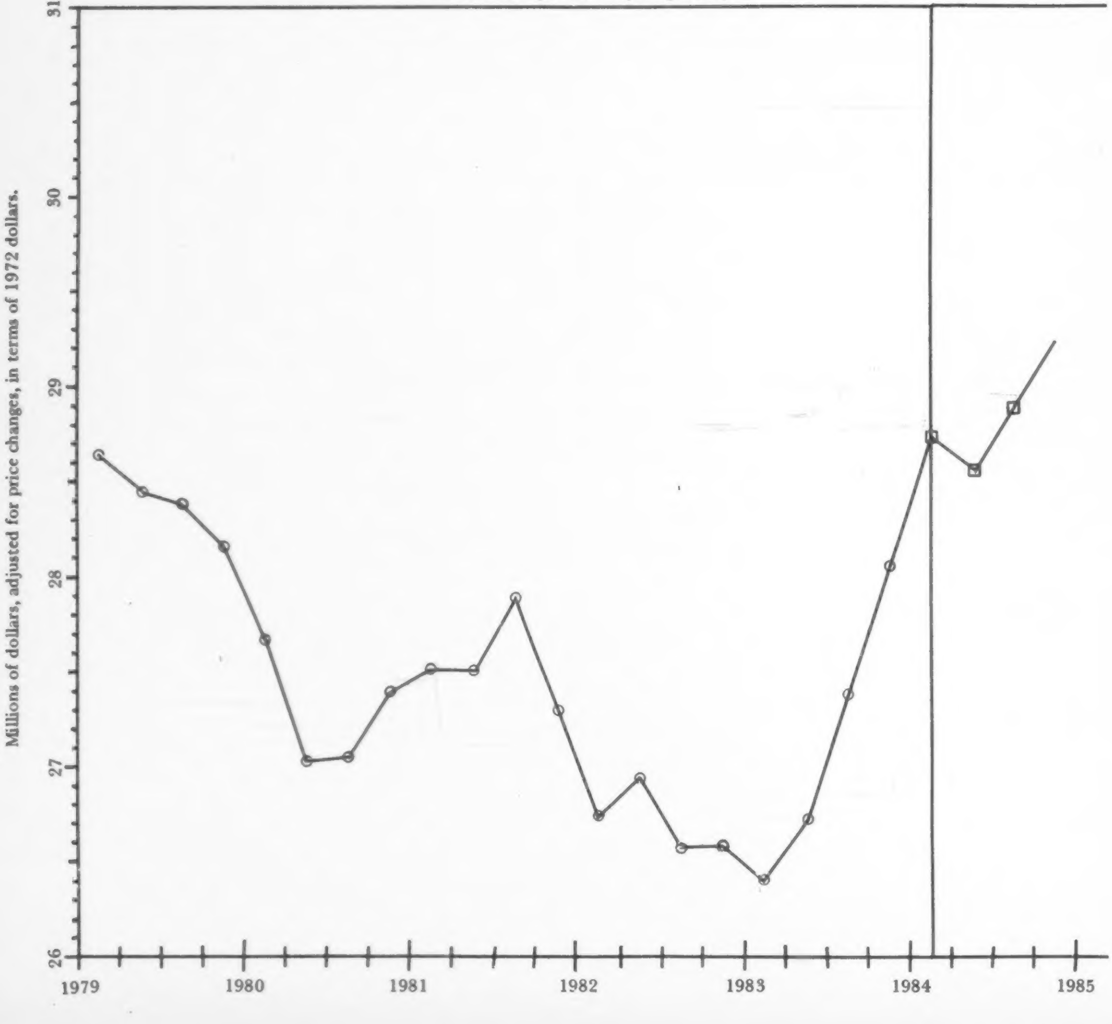
1. Millions of dollars, seasonally adjusted, expressed as an annual rate.
2. AR means annual rate.
3. Millions of dollars, adjusted for price changes, in terms of 1972 dollars.
4. Employment figures are not seasonally adjusted.
5. Includes all other nonagricultural and agricultural employment in addition to manufacturing and nonmanufacting employment.

Nonmanufacturing employment declined by 9% from 1979 to 1983, much less than the decline for manufacturing. The category of services and miscellaneous showed increases throughout the period. Employment growth in nonmanufacturing in 1984 will be small (2.0%) with retail trade showing the greatest increase.

The unemployment rate will continue to decline, but it will remain distressingly high (9.9% annual average) in 1984. The trend will be downward during the year. From 1979 to 1983, declining employment led to substantial outmigration. Had this outmigration not occurred, the unemployment rate would have been even higher. The reversal in 1984 of the employment declines will slow down the outmigration so that improvement in the unemployment rate will be gradual.

Table 1 presents the updated 1984 quarterly forecasts of selected variables in the Econometric Model of Indiana. The quarterly figures supplement the preceding discussion which concerned annual totals only. The dip in 1984:2 for real personal income results from the concentration in the first quarter of the effects of the PIK program on farm proprietors' income. The other components of personal income show fairly steady growth in each quarter. The employment data are not seasonally adjusted, so the quarter-by-quarter changes

Figure 1
Quarterly Real Personal Income, Indiana
1979-1984 (Seasonally Adjusted)



reflect seasonal patterns as well as whatever trend exists. Generally, the Indiana economy will grow less rapidly at the end of the year than it did at the beginning.

Although 1984 will not bring employment back to the 1979 peak, it will bring Indiana's real personal income above that of 1979. **Figure** 1 shows the quarterly real personal income from 1979 through 1984. The peak of 1979:1 was surpassed in the 1984:1. As explained above, the drop in 1984:2 is the result of the heavy impact of the PIK program in only 1984:1. The forecasted levels for 1984:3 and 1984:4 show growth continuing with figures again above that of 1979:1. The surpassing of the 1979:1 peak in real personal income is the result primarily of growth in components other than wage and salary income. Real wages and salaries, although recovering nicely from the lows in 1982:4 and 1983:1, will remain below the 1979:1 peak.

Looking ahead to 1985, we foresee continued growth for the Indiana economy at nearly the same rate as in 1984 provided the national economy continues its recovery. ☐

Indianapolis

Robert Kirk

Professor of Economics at Indiana University-Purdue University in Indianapolis

Housing permits, one leading economic indicator, declined during the first quarter of 1984. However, other leading economic indicators for the Indianapolis metropolitan area, such as hours worked in manufacturing and new unemployment insurance claims, showed continued expansion of the economy. Housing permits reflected the rise in mortgage rates and the strong demand for loanable funds generally. Therefore, although housing may be constrained by interest rates, other sectors of the economy appear to be sufficiently strong to maintain the recovery, but at a lower level.

Indianapolis' recovery has been very similar to its 1975-76 recovery in terms of total employment gain as illustrated in the **Figure**.
However, the recovery has not been uniform across selected major sectors as shown in the **Table**.

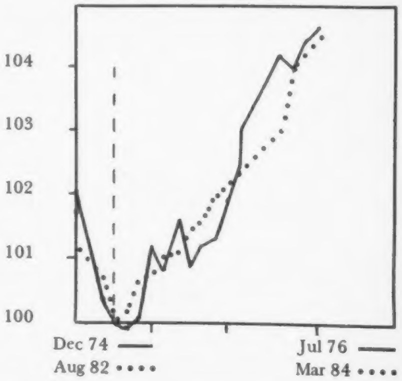
Since the business cycle trough in November 1982, total establishment employment has increased 4.5%. However, the March 1984 employment level was still below (at 96% of) the level at the peak of the cycle in November 1979. The auto sector has shown the greatest percent increase (37.4) during recovery; however, the March 1984 level was only 59% of the previous peak in March 1979. These numbers suggest that significant gains have been made in labor productivity.

The nonmanufacturing sector—a sector where productivity gains are more difficult to generate and to measure—has expanded during recovery at a greater rate than manufacturing. Plant closings have restricted durable goods employment growth—a problem that did not exist to the same degree during the 1973-75 recession. The loss of durable goods manufacturing jobs and the gain of services jobs probably has meant that the distribution of income has changed. Although there are high-paying jobs in the services, such as management consulting, there are some low paying ones, too. Construction, a cyclical sector, has expanded during recovery, but remains at about 80% of the previous peak in January 1980. The two sectors that have exceeded thir previous peaks are finance, insurance and real estate (FIRE), and services. The services sector is approaching the employment size of manufacturing.

It is interesting to note the range in time over which sectors experience the business cycle. For example, autos peaked in March 1979, total employment in November 1979, and FIRE in September 1981. Each sector changes in response to

Figure 1

A Comparison: 1975 and 1983 Indianapolis Recoveries (total establishment employment)



Note: This figure compares monthly seasonally-adjusted patterns of employment in the 1975 recovery with the current 1983-84 recovery. Data for 3 months before and 16 months after the trough of the 1973-75 recession are shown as percentages of the March 1975 employment level. The employment pattern for the 1983-84 recovery is super-imposed. This series is indexed to November 1983, the trough of the 1979-82 recession.

Table 1
Employment Indices for Selected Major Sectors of Indianapolis Metropolitan Economy

Sector	*March 1984 trough (Nov 1982 = 100)*	*March 1984 peak (month year = 100)*	
Total employment	104.5	95.9	(Nov 1979)
Manufacturing	103.7	81.1	(Jun 1979)
Durable goods	105.0	76.1	(Mar 1979)
Autos	137.4	58.8	(Mar 1979)
Nondurable goods	100.7	93.4	(May 1979)
Nonmanufacturing	104.7	99.8	(Dec 1979)
Construction	106.2	79.8	(Jan 1980)
Wholesale	102.9	94.2	(Jan 1980)
Retail	104.7	99.3	(Nov 1979)
Finance, Insurance, and Real Estate (FIRE)	103.9	101.8	(Sep 1981)
Services	108.3	112.1	(Jan 1980)
Government	100.9	92.5	(Sep 1978)

national, sectoral, and regional factors. In the short run, for example, auto demand is positively related to consumer sentiment and the price of used cars. In the long run, auto demand is positively related to real disposable income and the age of the auto stock. Therefore, if the Conference Board's Index of Consumer Sentiment turns downward this fall, we might expect a downturn in auto demand and negative impacts on the auto industry in Indianapolis. As long as inflationary pressures are dampened and employment gains continue, real disposable income can be expected to increase and support auto demand. The possibility of a strike exists. Since the auto industry has been running at production rates above straight-time capacity to meet current demand, it may be difficult for a strike-targeted firm to stockpile. Continued change in production methods can be expected from the auto industry. For a profitable U.S. small car to be produced, the production process will change to favor the use of off-line subassembly and then modular assembly with emphasis on a team-built concept. Hopefully, Indianapolis as an auto *parts* town will play a continuing role in these new production processes.

Manufacturing and Business Services

Much attention is being given to the manufacturing sector, as it should be, in economic development strategies. However, manufacturing and business services are complementary. Business services include advertising, computer and data processing services, management consulting, public relations, engineering, architectural and accounting services, and research. High-tech firms are small initially and need to be in close proximity to the supportive business services sector. Although Indianapolis has experienced a relatively high rate of growth in business services employment, business services employment *per capita* in Indianapolis is below the national ratio. The arrival of the Hudson Institute this fall in Indianapolis will make an important contribution in this context.

From Keynes to Schumpeter

The first part of this report has used a business cycle (Keynesian) framework. However, this perspective is inadequate to capture the dynamics of the Indianapolis economy. From the 1980 Census through 1982 the Indianapolis metropolitan area (eight counties) is estimated to have gained more than 15,000 people while the rest of Indiana lost 34,000 people. What was the draw?

Certainly a more diversified economy helped. The Keynesian analysis, traditionally, has focused on demand management of the business cycle at the national level and implications for the local level. This focus has had its price—it distracted entrepreneurial ability from future-oriented activity that might expand the economic pie to lobbying and distributional concerns over the share of the pie. On the other hand, Schumpeter's framework has focused on economic evolution, and the role of entrepreneurs who create new markets, "intra-preneurs" who revitalize struggling firms, and venture capitalists who supply financial capital. Entrepreneurs, "intra-preneurs" and venture capitalists are individuals who play the role of catalytic agent in economic change. As a result of the efforts of these types of individuals, in cooperation with the public sector, the Indianapolis economy is generating new kinds of economic activity.

The most visible of these kinds of activities is the Convention Center and Hoosier Dome. The types of events scheduled this fall are associated with an estimated multiplier of 2.25 for every dollar coming in. This multiplier captures only a portion of the impact because the existence of the Dome makes a series of other investment projects attractive.

The presence of the Indianapolis Colts is expected to bring approximately $40-50 million into the metropolitan area. The nearby Union Station will experience significant renovation activity during the second half of 1984. Other convention-related business (such as hotel construction and renovation, and restaurants) is being stimulated in the vicinity of the Dome. To the immediate west, the relocation of Washington Street in conjunction with the White River State Park will be in progress. Major construction projects involving office space (by developers, such as Welch and Duke) and hospital expansion (such as Methodist, Community, St. Vincent, University Heights, and Riley Children's) should sustain nonresidential construction employment during the fall. The high level of mortgage rates may be pushing some households out of the residential housing market and dampen residential construction employment. Thus, the recovery will continue but, as it matures, the risk of the dampening effect of interest rates increases. □

Fort Wayne

Thomas L. Guthrie

Associate Professor of Business and Economics, Indiana-Purdue University at Fort Wayne.

The Fort Wayne area economy[1] appears to be on track to realize the forecasted gain in employment of 2-3% in 1984 (*IBR*, Nov-Dec 1983).

Through April, payroll employment in the Fort Wayne area had increased 1.8% or 2,800, from a seasonally adjusted level of 157,800 last December.

Leading indicators of economic activity at both the national and area levels suggest continuation of the current cyclical recovery through at least year-end.

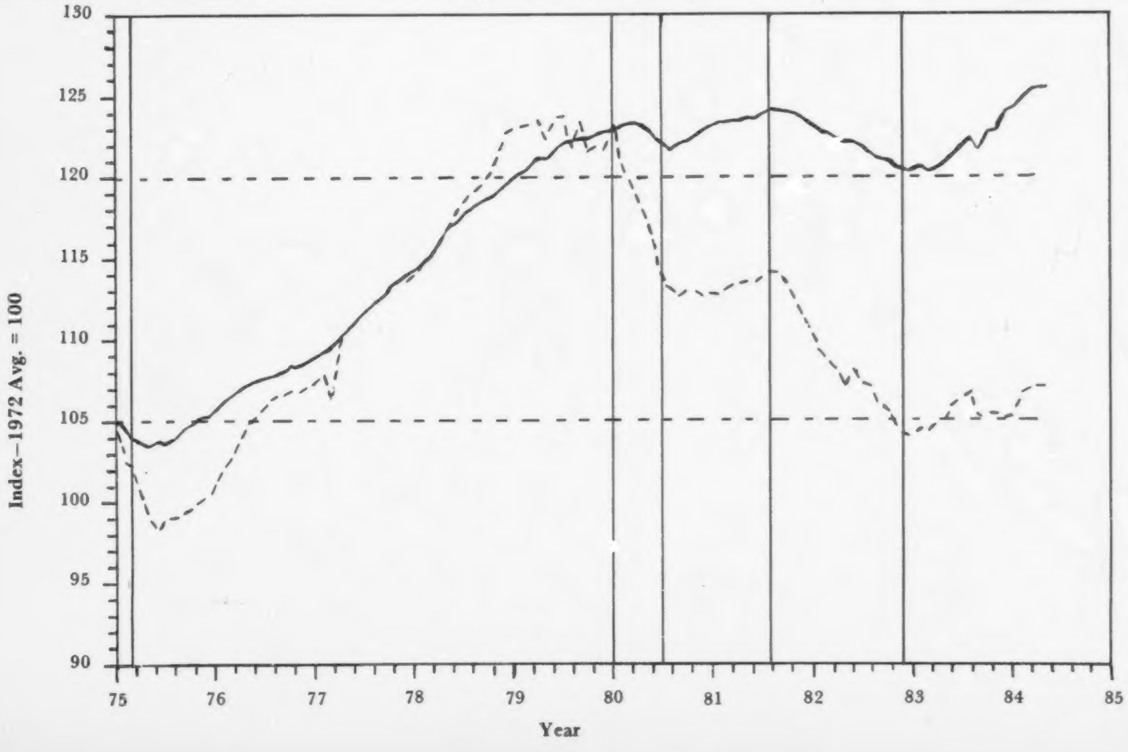
To report that what turned out to be a four-year decline in area employment finally has ended is reason for celebration; however, the relative weakness of the recovery compared to the national recovery is a stark, persistent reminder that the major problems associated with the economy of the Lake States region are still not solved. For example, nonagricultural payroll employment nationally has risen 5.4% since November 1982, the end of the last recession, compared with a 2.8% increase for the Fort Wayne area for the comparable period. (See **Figure.**)

Although the area business cycle has had a tendency to lag the national business cycle, the growth rate of area employment at this stage of the typical recovery has exceeded the growth rate nationally. (Note the two recovery patterns following the end of the 1973-1975 recession in the **Figure**).

That the Fort Wayne area manufacturing sector continued to trim labor and substitute other inputs even after the end of the national recession is evidenced by the fact that use of electricity for industrial purposes rose 18% while employment was decreasing 1.9%. The restructuring of the manufacturing sector—especially durable-goods manufacturing—has continued unabated.

Net out-migration and the almost 30% decrease in employment over the four-year

Total Wage and Salaried Employment—U.S. and Fort Wayne MSA



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[1] The area includes Adams, Allen, DeKalb and Wells counties. Effective June 30, 1983, the Fort Wayne metropolitan statistical area (MSA) was redefined to include Whitley County and exclude Adams and Wells counties. However, employment data has yet to be revised to coincide with the redefinition.

period has dictated a downsizing of the support sector of the area economy. This also continues despite the cyclical recovery which in some cases is too little, too late. For example, on June sixth a local supermarket chain announced the cessation of operations which affected seven stores in Fort Wayne and one each in Bluffton and Huntington. The closing of the seven stores reduced the total square footage devoted to supermarkets in the Fort Wayne area by approximately 20%.

Although it is difficult to prove immediately because of lack of timely economic data for nonmetropolitan counties, casual observation reveals significant manufacturing and warehousing construction in the corridor of counties between Allen County (Fort Wayne) and the southern boundary of Michigan. This is consistent with a trend reversal which occurred during the 1970's wherein " . . . for the first time in 150 years, rural areas and small towns grew faster than urban areas."[2] Additionally there may be some border hopping by companies—especially smaller ones—to take advantage of nonmanufacturing cost differences which may exist for different industries and/or for all industries.

If the observation is true, the growth obviously militates the downturn in the metropolitan area since it remains the primary hub for economic activity. □

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[2] Jackson, G., et al. *Regional Diversity: Growth in the United States, 1960-1990* (Boston, Auburn House, 1981).

Richmond

Ashton I. Veramallay

Director, Center for Economic Education, Indiana University East

The Richmond area economy can expect continuing improvement in the months ahead as the national recovery maintains its current speed. Retail trade, aided by the rise in consumer real personal income, is much better than a year ago. The retail sector will receive an additional boost as consumers spend their tax refunds within Wayne County.

Business confidence in the future is tempered by the continuing rise in the federal budget deficits. These deficits are partly responsible for the high rates of real interest. When interest rates are high, businesses tend to make smaller investments in plant and equipment; consumers tend to buy fewer durable goods such as automobiles, houses, and appliances. This, in turn, can have adverse effects on the local economy in terms of output, employment, and income. It is important to note that the local economy, a key producer of transportation-related components, is highly influenced by the economic vicissitudes at the national level.

However, the unemployment picture is not so bright because of structural changes within the state and national economy. Technological change, for example, alters the structure of labor demand in regard to the kinds of jobs that the economy offers. Thus, the unemployment rate in Wayne County will remain in the 11-12% range unless it is offset by the expansion of existing businesses and/or the attraction of new businesses.

When there is high unemployment in the county there are both economic and noneconomic costs to it. The economic cost is obviously the foregone output—the goods and services which we could have produced but did not. Some of the noneconomic costs are loss of self-respect, family disintegration, increase in crime rates, and social unrest. Consequently, there are additional pressures on our social agencies such as the United Way, the Red Cross, the Salvation Army, Mental Health, and others to care for the unemployed. To deprive people of jobs is to push them out of society. A job is the only hope for material and social advancement in our highly competitive economic system.

Overall, I expect gains in local manufacturing and retail trade activities in the coming months, provided high interest rates do not choke off the current national recovery. □

Anderson—Muncie

Robert R. Jost

Professor of Economics, Ball State University

Madison County's population declined a precipitous 5.28% between 1980 and 1983 and Delaware County experienced a 3.27% reduction. According to a Dun and Bradstreet survey, Madison and Delaware counties were ranked 2nd and 10th in relative population declines among all counties in the nation having over 100,000 inhabitants in 1980. The less populous surrounding area counties also constituting part of Economic Region 6 experienced comparable population decreases. Obviously, this population exodus reflects far more than a mere cyclical response to the most severe downturn since the Great Depression. It is the purpose of this analysis to briefly outline the probable major long-run causes for this decline. Acknowledging that these long-run causes are both complex and varied, and not always susceptible to quantification, a listing would probably include many of the following causes:

- The locus of power of the nation's economy previously centered around a steel and auto industrial complex that rested on the happy combination of coal, iron ore, and limestone generously linked by the Great Lakes. The locus has now shifted to a more southernly oriented petro-chemical industrial base.
- Paralleling this shift in the locus of power has been a long-term decline in Indiana's share of the nation's output. Louis West's study (*IBR*, April 1980) indicated a significant declining trend for the 1958-78 time frame. Although comparable data for the 1979-83 period is not available, it is highly probable that the rate of decline sharply accelerated. Personal income data provide substantial evidence of this accelerated decline. Indiana's share of the nation's personal income in 1969 was 2.5%, 2.4% in 1979, and had plummeted to 2% by 1983.
- Indiana farmers, like those of the nation, have been plagued for the past three years by erratic and generally low commodity prices, declining land values, high interest rates, and increased production costs. This sustained decline in farm profitability has left many of these farmers and local banks carrying their debt in a tenuous financial situation. The decline in farm income impacted negatively on many of the rural communities in Region 6, and exacerbated the impact of the manufacturing contraction.
- Indiana has not fared well at getting its share of federal government expenditures. It ranks 49th among the states in per capita federal outlays and 34th in per capita federal defense expenditures. For every tax dollar it contributes for national defense, only fifty-eight cents is spent on defense outlays in Indiana. On the state and local government level, raising taxes to maintain financial solvency, and curtailing spending programs, has exercised a dampening effect on economic activity.
- Indiana's relatively disproportionate reliance on manufacturing—particularly durable goods manufacturing—is a drag. Manufacturing provides over 37% of Indiana's source of income, and the troubled durable goods sector alone accounts for over 28%. These figures contrast sharply with those for the U.S. as a whole—28% in manufacturing and only 17% in durable goods manufacturing. As consumer demand for durable goods is far more cyclically sensitive than for non-durable goods and services, Indiana's heavy reliance on durable goods production does much to explain the high cyclical sensitivity of the state. In December of 1982, the low point of the recession, total U.S. payroll employment was only about 1% below the 1979 average, but the volatile durable goods employment was down 17%. For Anderson and the Muncie SMSAs, the situation was far more traumatic! Employment in the Anderson SMSA in December of 1982 was 23% below its 1979 average, and durable goods employment was down a whopping 38%. For the more diversified Muncie economy, the comparable figures were 11 and 36% respectively. Yes, people left Anderson and Muncie.
- Anderson has basically been a high-wage General Motors company town since World War II, and the auto industry has played an important role, though to a lesser degree, in the high-wage base of the Muncie SMSA. In 1983, Anderson's average weekly earnings in manufacturing was $563 and Muncie's was $516, whereas Indiana's was $449.

Successive union contracts between 1946 and 1980, frequently following exhausting strikes, wrought large increases in wages and benefits, as well as work rules sought by organized labor. It is not a little startling that between 1960 and 1980, a time frame in which car imports grew from 6.7 to 26% of total sales, the ratio of auto wages to the national industry average wage rates increased from 1.4 to about 1.8. Even the oligopolistic auto industry cannot pursue such a course indefinitely. Government regulation, escalating gasoline prices and a rising torrent of quality foreign imports finally forced the Big Three out of their years of inertia. In an effort to reverse course, Detroit has been scrapping old plants, combining operations in existing plants, building new ones, and struggling to develop radical changes in the way they design and build cars. In the past nine years, U.S. automakers have invested an unprecedented $73 billion on new plant and equipment. However, very few of those dollars are being spent in the sixteen-plant, five-hundred-fifty-acre complex in Anderson or in the Muncie Chevrolet plant. Rather, the GM expansion has been in new facilities in the South producing auto components formerly made in Anderson—some examples are a new plant in Meridian, Mississippi in 1975, a Laurel, Mississippi plant in 1977, and an alternator plant in Albany, Georgia a few years later. While GM intensively scoured the South for plant sites, it sold acreage previously set aside for expansion in the Anderson complex. In short, much of the production facilities in Anderson, Muncie Chevrolet and the Muncie Warner Gear plant are typical of those aging midwestern smokestack industries to which the label "Rust Belt" is now applied. Newly designed plants armed with the latest equipment offered much greater production efficiencies than refurbished existing plants—this is particularly true when the new facilities are manned by a more supple and eager labor supply not conditioned to playing an adversarial role. The South not only offers such a labor supply, but a more hospitable tax climate as well.

The future of the auto plants in the Anderson-Muncie SMSAs will depend increasingly on management's ability to vigorously apply high technology to auto and auto parts production and to enlist the spirited cooperation of labor in producing quality products able to compete in world markets. The American auto worker receives $8 more per hour than his Japanese counterpart, and the productivity of the Japanese auto industry is estimated to be two and one-half times that of the U.S. Given the past unhappy history of labor-management relations in Anderson and Muncie, and after attempting to evaluate the current faltering attempts to turn the situation around, it requires more than a little temerity to be optimistic about the future. As auto labor negotiations open, the unions notice the "good times" news of record salaries going to auto executives. The American auto industry, like the

American steel industry, remains a sick industry. The heady profits enjoyed by U.S. auto companies the past year were subsidized by the American car buyer to the tune of roughly $2,000 tacked on to each car's price tag as a consequence of import quotas on Japanese cars. Quotas are not forever. In the long run, jobs can be preserved only by a competitive labor force, competitively equipped. People have left the Muncie-Anderson SMSAs because thousands of high-paying manufacturing jobs have left the area—jobs that created income by exporting products to other regions—jobs that generated additional service jobs locally.

One and a half years into the recovery, employment in the Anderson-Muncie SMSAs remains appallingly below that of the heady years of 1978-79. ☐

Terre Haute

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Technological change can have a dramatic impact on a region, causing some of its resources to become less valuable, and bringing other attributes to the forefront. Two developments in the past six months forcefully illustrated this in Terre Haute. An 84-year-old factory closed and a conditional agreement was reached to start on a new and futuristic enterprise.

The wrecking ball will soon obliterate a factory which, in recent years, was known as Midland Glass, and which, in its final months, was called Anchor Glass. To know the history of this building is to possess insight into factors that sparked the growth of manufacturing in this area and to understand some of the reasons for present difficulties.

When Chapman Root came to Terre Haute, about 1899, the town already possessed three distilleries and two glass bottle factories. Since whiskey weighs less than the grain it is made from, distilleries minimized transportation costs by locating near ample supplies of grain and at a transportation hub or transhipment point. Glass factories chose sites near their main customers, the distilleries, and near coal fields, where energy was inexpensive. The particular success of the Root Glass Co. was to depend, additionally, upon entrepreneurial flair. The Coke bottle, a major symbol of American preeminence in mass production and mass marketing, was designed and first produced there. Root obtained a Coca Cola bottling franchise which became the basis of his grandson's fortune, presently in excess of two hundred million dollars. Prohibition had closed the distilleries and, in 1932, Root sold his glass factory. Ownership would change several times subsequently, but would remain absentee. After the repeal of Prohibition, Terre Haute distilleries and breweries came back, but only transiently, as marketing skills became more important than minor transportation advantages. By 1984, an obsolete plant was producing an obsolescent product. Energy costs, from natural gas and electricity, were not particularly low, and the major customers were no longer local. In recent years, Midland Glass employed between three hundred and five hundred workers. Its closing dealt a severe blow to its employees and a serious blow to the economy of Terre Haute, but it came as no real surprise.

When the Root Glass Co. came into being, American entrepreneurs—Rockfeller, Carnegie, Vanderbilt—were international household names. Today, businessmen neither seek nor attain such widespread fame, but Akio Morita, Chairman of Sony, comes relatively close. Should a facility producing video laser discs come to Terre Haute, it will be the result of a deal worked out on June sixth and seventh between Morita, the Mayor of Terre Haute, and the Governor of Indiana. Sony is promised a complex and extensive package of concessions, tax abatements, and subsidies. A central condition of the deal is the repeal of Indiana's unitary tax, a levy bitterly opposed by the Japanese, in part because its computation requires the disclosure of global cost and sales data. Other conditions of the agreement can be fulfilled only if the city receives a UDAG grant, an eventuality beyond the control of the Mayor or the Governor. The video laser disc plant will utilize much of the same technology as the CBS-Sony Digital Audio Disc Co. presently under construction. The presence of an engineering school able to support that technology was a necessary precondition for the siting of both plants.

The Sony plant is to cost at least $15 million and to employ a skilled labor force of at least one hundred. The laser discs pack binary-coded information extremely densely, and so are capable of producing high quality pictures and sound. However, under present standards, home television receivers cannot utilize that capability. The laser discs are used by industry for training and sales presentations, and they have interesting potential for storing information in a computer readable format.

The National Air and Space Museum put its collection of one million photographs on just ten video discs. Sony envisions its Terre Haute plant as being a custom job shop, at least initially. The plant will replicate on discs material sent to it by industry, government, or educational establishments. Such work is presently performed in Japan with a turnaround time for the U.S. of about one month; it is hoped that the Terre Haute plant will reduce that time to one week. In 1900, while starting any new glass company would be risky, the future of the glass bottle seemed assured. In contrast, the future of the laser disc appears quite uncertain.

For the first half of 1984 Terre Haute participated, if sluggishly, in economic recovery. Seasonally-adjusted unemployment, which peaked at 13.9% in January 1983, and fell to 11.2% by September, fell further to 10.9% by April 1984. For the twelve months ending in April, area establishment employment rose by 1,600. However, none of that improvement was in manufacturing, and three-fourths of that increase was in retailing. Much of that retailing gain came from new or reopened stores rather than new business.

While real estate activity picked up, new listings outpaced closings and prices remained depressed. Construction of new homes increased, with the number of building permits issued in the twelve months ending March 1984 running at double the level of the previous twelve months. Total construction employment remained level, so that commercial and industrial construction must have declined. This is confirmed by construction craft unions reporting unemployment running from 30 to 50% of their membership.

The outlook for the remainder of the year is for continued gradual improvement. The production of digital audio discs should begin, aiding manufacturing employment while reducing construction activity. Construction work could begin on the video laser disc facility.

For the longer term, the community may be at a juncture. Without new industry, continuing economic decline appears certain. With new industry, the future is more promising, but also more volatile. ☐

South Bend—Elkhart

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The economies of both South Bend and Elkhart showed significant improvement during the last three quarters in 1983 and the first quarter in 1984. In April 1984, the South Bend unemployment rate was 7.3%, the lowest level since the recession began in November 1979. The number of persons employed in the South Bend area has grown to 132,000, which is 14,000 above the mid-recession low of 118,000 in early 1982, and more than 5,000 above the April 1983 level.

Elkhart County is experiencing the lowest level of unemployment in the state—5% for April 1984, and the March employment figure of 83,500 is the highest level of employment ever experienced in Elkhart County—surpassing the 83,000 level for June 1978. The preliminary estimate for April 1984 is another record of 85,900 jobs.

Our other local indicators also show substantial improvement for both the South Bend and Elkhart economies. (See Tables 1 and 2.) In South Bend, eleven of our twelve local indicators show improvement from March 1983 to March 1984. New car and truck sales are up significantly, and both commercial and industrial gas sales are up. Help wanted advertising is up almost 75%. Housing is the one area with only modest improvement as the value of permits is up only 2%.

In Elkhart, eight of our nine indicators show improvement. Commercial and industrial gas sales are up almost 40% and

Table 1
Selected Indicators for South Bend
(Seasonally Adjusted Indexes: 1967 = 100)

Indicator	*1983 Average*	*1978 Average*	*Percent Change '78-'83*	*March 1984*	*March 1983*	*Percent Change March '83-'84*
Employment Data[1]						
Total Employment	111.2	119.2	−6.7	115.8	109.7	+5.6
Manufacturing Employment	76.7	95.4	−19.6	81.0	74.9	+8.1
Nonmanufacturing Employment	134.5	135.2	−0.5	139.3	131.5	+5.9
Help Wanted Advertising	68.4	166.2	−58.8	101.8	58.4	+74.3
Unemployment Rate	8.6	5.8	n/app	8.0	9.3	n/app
Utilities[2]						
Industrial Electricity Sales	130.5	107.1	−10.0	134.4	125.8	+6.8
Commercial Gas Sales	111.6	122.3	−8.7	139.9	94.5	+48.0
Industrial Gas Sales	70.9	89.0	−20.3	88.6	70.4	+25.9
New Passenger Car Sales[1]	54.1	135.1	−60.0	87.5	52.2	+67.6
New Truck Sales[1]	148.3	335.1	−55.7	286.3	134.4	+113.0
Housing Construction Data						
Estimated Value of Permits[3]	234.6	400.0	−41.4	251.7	246.3	+2.2
Number of Permits Issued	61.5	159.7	−61.5	65.6	66.0	−0.6
Average Value Per Permit	390.6	265.2	+47.3	399.4	396.0	+0.9

1. South Bend SMSA
2. City of South Bend
3. St. Joseph County excluding the cities of South Bend and Mishawaka

Source: Bureau of Business and Economic Research, Indiana University at South Bend industrial electricity sales are up almost 10%. Housing is doing much better in Elkhart with the value of permits up almost 60%, and the number of permits up more than 100%.

Both South Bend and Elkhart have benefited significantly from the substantial improvement in our national economy during the eighteen months. Both areas have benefited from the expansion of large numbers of local firms and from the addition of new firms into the area. Both local economies should show continued improvement through the second quarter, but the last half of the year will depend upon the national economy. If interest rates remain moderate and the national economy continues its expansion, then both local economies should continue to do well. A sharp rise in interest rates and a stagnant national economy will quickly retard local growth.

Elkhart faces an additional specific problem. Its expansion has been led by the RV industry and that industry is crucially dependent upon the availability of chasses from the major auto makers. A shortage of chasses has already caused some problems for RV manufacturers, and a major strike by the auto workers this fall could cause some layoffs. ☐

Table 2
Selected Indicators for Elkhart
(Seasonally Adjusted Indexes: 1967 = 100)

Indicator	*1983 Average*	*1978 Average*	*Percent Change '78-'83*	*March 1984*	*March 1983*	*Percent Change March '83-'84*
Employment Data[1]						
Total Employment	140.8	152.4	–7.6	159.1	134.2	+18.6
Manufacturing Employment	126.7	145.1	–12.7	150.6	117.9	+27.7
Nonmanufacturing Employment	260.3	262.0	–0.6	276.8	255.2	+8.5
Unemployment Rate	7.1	4.9	n/app	6.3	8.3	n/app
Utilities[2]						
Industrial Electricity Sales	177.4	150.4	+18.0	193.8	176.8	+9.6
Commercial Gas Sales	126.0	166.0	–24.1	171.9	126.9	+35.5
Industrial Gas Sales	221.1	240.3	–10.1	300.7	216.2	+39.1
Housing Construction Data[3]						
Estimated Value of Permits	182.3	313.4	–41.8	300.4	188.8	+59.1
Number of Permits Issued	69.0	184.3	–62.6	149.4	70.2	+112.8
Average Value of Permit	298.4	180.2	+65.6	225.2	337.1	–33.2

1. Elkhart SMSA
2. City of Elkhart
3. Elkhart County excluding the cities of Elkhart and Goshen

Note: Elkhart construction data has a base year of 1970 = 100

Source: Bureau of Business and Economic Research, Indiana University at South Bend

Jeffersonville New Albany (Louisville area)

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The economic recovery of the Louisville metropolitan area—Clark and Floyd Counties in Indiana and Jefferson, Oldham, and Bullitt Counties in Kentucky—broadened and strengthened during the past six months, with gains evident in nearly all major sectors. Most signs point to continued expansion in the months ahead. Nevertheless, some long-term problems persist, leaving many individuals still waiting for the recovery to reach them.

Industrial production finally began to turn upward in the last half of 1983. The Louisville Area Chamber of Commerce's industrial production index, which had reached a low of 98.4 for 1982 and the first half of 1983, rose to 102.5 for the second half of last year. (See Table 1.) In the five-county metropolitan area, manufacturing employment (seasonally adjusted) moved slightly upward during 1983, from a recession low of 81,750 jobs in the first six months to 83,250 in the second half. Then, as shown in Table 2, there was a more emphatic increase to an average of 86,500 jobs for the first quarter of 1984. One further indication of a production upturn is the industrial sector's higher utilization of energy; in April its gas consumption was 21% higher and its electricity usage was 13% higher than in April of 1983.

The growth in manufacturing jobs was concentrated in the hard hit durable goods industries, particularly in metal fabrication and the production of machinery and transportation equipment. These sectors include the large General Electric plant and the Ford truck plants, the higher output and employment levels of which reflect the

Table 1

Economic Indexes, Louisville Metropolitan Area, 1979-1983
(Seasonally adjusted: 1967 = 100)

Annual Averages	*Industrial Production Index*	*Trade and Services Index*	*Construction Index*	*Financial Index*
1979	120.7	150.1	150.6	365.2
1980	107.1	141.1	122.8	390.2
1981	105.8	142.7	122.3	401.0
1982	98.4	143.7	97.7	456.6
1983	100.4	147.8	141.0	514.1
1983 averages:				
First 6 months	98.4	147.8	123.7	491.5
Second 6 months	102.5	147.9	158.3	537.5

Source: Research Department, Louisville Area Chamber of Commerce

strong national surge in car and truck sales and in residential construction. Nationwide, April sales of light trucks were up 40%, sales of heavy trucks were up 10%, and shipments of major appliances were up 28%, compared with April 1983.

Local automotive dealers enjoyed their share of the rebounding market. In 1983 new car sales in Jefferson, Clark, and Floyd Counties totaled 31,000, a 19% increase over 1982. The upward trend continues. During the first four months of 1984 local dealers sold 22% more new cars than during the corresponding months of 1983, with domestic models accounting for much of the rise. While gains were strong on both sides of the Ohio River, the rate of increase was highest for the dealerships in Floyd and Clark Counties. If the remainder of 1984 follows the same pattern as 1983, area auto sales for the year should be about 37,500—more than halfway back from the recession low of 26,000 cars sold in 1982 to the 1978 peak volume of 47,500 cars.

Building activity has rebounded with vigor. The construction index in Table 1 recorded a 44% gain in 1983. During the second half of the year the index averaged 158.3, surpassing the 1979 peak of 150.6. In Jefferson County the value of building permits issued for nonresidential construction projects jumped 65% in 1983 to $145,900,000—the second highest level in a decade. Furthermore, in Jefferson, Floyd, and Clark Counties residential building permits doubled in both number and total dollar value during 1983. Although that recovery rate has slowed somewhat, nearly 50% more residential building permits were issued between January and April of 1984 than during that same period a year ago, with much of the 1984 increase occurring in Jefferson County. In the five-county metropolitan area, construction employment appears to be averaging about 25% higher than a year ago, but the Clark and Floyd County increase may be less than 10%.

Jefferson County realtors reported a record dollar volume of sales in 1983, and they expect 1984 to be equally good. While southern Indiana realtors did not have a record year in 1983, their sales have been growing steadily; during the first quarter of 1984 sales were nearly 20% higher than during the first quarter of 1983.

Following the typical business cycle pattern, Louisville area employment continued to decline after most other economic variables had turned upward. The bottom was finally reached in the last quarter of 1983, when nonagricultural employment dipped to 364,600 jobs (seasonally adjusted). Employment then rose decisively in the first quarter of 1984 to 372,600 jobs, the highest quarterly employment level in two years. Table 2 reveals that manufacturing employment actually turned upward much earlier, during the spring of 1983, but nonmanufacturing jobs continued to decline until the end of the year. In fact, in the two Indiana counties nonmanufacturing employment was still falling in the first quarter of 1984.

Disaggregation of the metropolitan area data reveals that most of the nonmanufacturing sectors that tend to be responsive to an expanding economy—including construction, retailing, and finance and real estate—did begin to show employment increases before the end of 1983. These gains were offset, however, by the loss of many government sector jobs. For example, from March 1983 to March 1984 government sector employment in Clark and Floyd Counties fell by 1,300 jobs; 600 of those jobs were in education and most of the rest were at the federal Census Bureau. As noted earlier, the rise in area manufacturing employment occurred almost entirely within the cyclically sensitive durable goods industries.

The estimated local unemployment rate (a somewhat unreliable statistic) declined throughout 1983. However, that decline (shown in Table 2) was largely illusory, the result of discouraged workers dropping out of the labor force and therefore not being counted as unemployed, rather than substantial numbers of the unemployed finding jobs. Between January and December the metropolitan area's civilian labor force declined by an estimated 13,000 workers. During the first quarter of 1984, as people grew more optimistic about employment opportunities, the situation began to change. By March the labor force had risen above its year-earlier level. Labor force reentry should accelerate in the months ahead, and that may produce some increases in the seasonally adjusted unemployment rate. Such increases will be misleading to the extent that they result from counting as unemployed those previously uncounted discouraged workers who had temporarily given up their unavailing efforts to find a job.

Although employment is rising, many families continue to face serious deprivation. Social service agencies are still reporting an increase, rather than a diminution, in the demand for their services. From

Table 2

Louisville Area Employment and Unemployment, 1979-1984[1]

	Total Nonfarm Employment	Manufacturing Employment	Non-Manufacturing Employment	Unemployment Rate
Louisville Metropolitan Area[2]				
Annual Averages				
1979	402,700	109,400	293,300	5.2
1980	391,700	100,300	291,400	7.9
1981	383,400	96,500	286,900	9.0
1982	367,800	86,700	282,200	11.7
1983	365,200	82,500	282,700	10.5
Quarterly Averages				
1983:1	366,100	81,600	284,500	12.1
:2	364,700	81,900	282,800	12.7
:3	365,600	83,200	282,400	10.2
:4	364,600	83,300	281,300	8.8
1984:1	372,600	86,500	286,100	9.0
Clark and Floyd Counties				
Annual Averages				
1979	46,800	12,100	34,700	6.3
1980	47,100	11,800	35,300	8.3
1981	48,200	12,300	35,900	10.6
1982	44,500	10,400	34,100	13.1
1983	45,100	10,700	34,400	10.5
Quarterly Averages				
1983:1	44,900	10,100	34,800	12.9
:2	45,100	10,500	34,600	10.6
:3	45,300	10,800	34,500	8.9
:4	45,200	11,300	33,900	9.6
1984:1	45,400	11,700	33,700	13.0[3]

1. The employment data refer to establishments located within the area cited; the unemployment data refer to residents of the area. Quarterly data are seasonally adjusted.

2. Includes Floyd and Clark counties in Indiana and Jefferson, Oldham, and Bullitt counties in Kentucky.

3. Due to statistical inconsistencies, this rate cannot be directly compared with the 1983 Clark/Floyd unemployment rates.

Sources: Indiana Employment Security Division; Kentucky Department for Human Resources.

January through May of 1983, for example, Dare To Care provided emergency food supplies for nearly 27,000 persons. During the same five months this year they provided emergency food for nearly 33,000 persons, exceeding the total emergency food they supplied during all of 1980 and nearly equalling their total for 1981. The growing number of requests issues not only from jobless workers whose unemployment benefits have run out but also from the new class of "marginal income" families: families that lost high-wage blue collar jobs and that face great financial and emotional strains as they attempt to adjust to the much lower pay scales of the jobs now available.

Looking to the future, there is reason for both optimism and concern about the Louisville area economy. The optimism springs from the continuing strength of the national recovery and its impact on local producers; from the vigor of the local construction and housing sectors; and from the $364,000,000 in local capital investment projects announced last year by 250 new or expanding businesses. These projects are expected eventually to provide some 8,000 new jobs, in addition to the broadly based employment increases that should occur without major capital investments as the economy continues its recovery. Nearly half of those 8,000 jobs will be in manufacturing and health services, and should be reasonably well-paid. The remainder will be concentrated in lower-paid areas, particularly retailing, hotels and restaurants, and other service areas.

The major concern about the economy in the near future centers on the possibility that national developments may cause interest rates to rise sufficiently to choke off the recovery. At present that does not seem likely to pose a serious problem for the remainder of the year—unless the upward creep in interest rates accelerates significantly. A second concern is that tight state and federal government budgets may continue to limit the growth of nonmanufacturing employment and incomes. The longer-range concern regards the apparently permanent loss of so many high-wage manufacturing jobs, and the growing predominance of low-wage and even part-time employment in retailing and services. It is too early to estimate the magnitude of this long-range problem, but its present impact on some of our neighbors should not be ignored as the general economy continues to expand in the months ahead. ☐

Evansville

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The recovery that started in the first quarter of 1983 continued throughout the year for the Evansville economy. In terms of the Evansville area business index, the composite index rose from 1982's 102.86 (using 1977 as the base period) to 1983's 105.16, a growth rate of 2.5% (see Table). The growth rate was not impressive compared to the national performance. The real G.N.P. grew in 1983 by 6.2%. Two factors may be held responsible. First there was the Whirlpool worker's strike which lasted for 109 days in the second quarter. Without the strike, the regional economy could have gained another 1% in growth rate. The second factor responsible for the low growth rate was a high rate of interest. The high interest rate had smothered the recovery of the local housing sector, which in turn hurt the production of consumer goods on which the regional manufacturing sector heavily depended. Indirectly, retail trade, services, transportation, finance, and ultimately total employment also suffered the adverse effects of high interest rates.

The absence of automobile industry affected the Evansville area in two ways. When the economy was in the 1981-82 recession, the area economy was spared from the adverse effect of the declining automobile industry. In 1983 the situation was reversed. With the rising economic activity and the import restriction on foreign autos, the automobile industry was very much a part of the recovery process, but the Evansville economy was unable to take part in this growth.

During 1983, various sectors of the Evansville economy did not grow in the same pattern. Industrial production had the best showing by registering a 3.5% growth. The trade and services industries grew at a moderate rate of 1.7%. The construction sector achieved a growth rate of 12% mainly due to the very active industrial and commercial construction, while the housing industry struggled under the pressure of high interest rates. The financial sector gained 2% in its activities partially due to stronger demand for credit in the growing economy. The transportation sector lost 2% in 1983. Probable causes for such a decline are deregulation of trucking and airline industries and slow economic growth in the region. The employment index declined 2% in 1983 in spite of the rising economic activities. The employment index fell below the 1977 level from March to May when the Whirlpool workers' strike was on. In the last four months of 1983, the employment index rose above the 1983 level, but the annual average still remained below the 1982 index.

In short, the 1983 performance of the Evansville economy was generally a strong one normally expected in this phase of economic recovery. The record of the performance for the first half of 1984 is not complete; the data available at hand are only for the first quarter. Thus the mid-year review will be mostly based on this limited data and the recent reports from the local economic news. In terms of the composite index, the first quarter showed an improvement of 3.1% over the fourth quarter of 1983. This is impressive growth. The industrial production rose by 4.3% and the construction activities rose by 5.7%. Transportation also rose by 2.6%. The growth in the trade and services sector was a meager 0.4%, quite similar to the national trend. The financial sector registered a decline of 1.1%, possibly caused by worries of high interest rates. The employment index also declined by 0.6%. The hesitancy in the hiring of new workers may be caused by the saturated consumer demand and the resulting reluctance in the business investment under the pressure of high interest rates. In Evansville, the health care industry has trimmed its workforce due to a decreasing occupancy rate in hospitals and the competition from the popular minor emergency care centers.

From the overall observation of the local economy, one can easily conclude that the growth trend established through 1983 and the first quarter of 1984 continued to prevail in the second quarter and probably will for the remainder of the year. The growth rate in the second quarter should be less than the first quarter, the major reason being saturated consumer buying and hesitancy in business investment arising from the worries of the large federal budget deficits and the resulting high interest rates.

One economic adjustment the Evansville economy has to undertake in the coming months is the layoffs of Whirlpool workers by the closing of its Walnut plant. Thousands of workers are affected; about half may choose to retire while the others have to go through retraining programs. The temporary impact of such a plant closing may be felt in retail businesses for months to come. The offsetting factors must come from entries of new businesses and expansions of the existing firms. In spite of this adjustment, the Evansville

Evansville Area Business Index
(Revised, 1977 = 100)

Month	*Industrial Production*	*Trade and Services*	*Construction*	*Transportation*	*Finance*	*Employment*	*Composite Index*
1983 August	108.78	107.42	112.36	90.97	105.04	102.04	106.62
September	112.07	107.14	98.37	92.42	106.28	103.00	106.59
October	114.91	103.71	98.90	92.28	106.23	103.02	106.42
November	110.06	105.45	98.92	92.10	107.11	103.79	105.49
December	120.08	107.63	97.57	93.81	106.22	104.85	109.91
1984 January	115.73	108.94	100.47	96.67	106.98	103.78	109.05
February	119.33	105.35	103.19	93.81	102.47	103.09	108.83
March	124.93	103.85	110.07	95.05	105.64	102.82	111.01

economy should be able to cope with it in the long run.

Although the employment picture has improved slightly in the last several months, the unemployment rate of the region was 10.0% in March 1984. In the same month the national rate was 7.8% and the Indiana rate was 10.2%. The Evansville rate used to be the second lowest of SMSAs in Indiana during the 1980-82 period. But now the Evansville rate is one of the high rates among the Indiana SMSAs. The reason was given earlier in the first part of this article. The unemployment rate in the area may stay high as long as the interest rates are not coming down to further expand the consumer demand and business investment, or some special manpower programs are implemented. In the short run—that is, for the remainder of this year—the high unemployment rate seems likely to continue.

In summary, the Evansville economy has begun to grow again since 1983 and the growth process still continues and will continue in the months ahead. The growth rate of 1984 in terms of the Evansville area business index should be about 4 to 5%, better than 1983's 2.5%. □

Gary Hammond East Chicago (Calumet area)

L.P. Singer

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The disturbing aspect of the present Northwest Indiana business cycle is that the economic recovery which is now firmly rooted nationwide—and which in some regions of the country is proceeding at a much faster pace than had been anticipated—has not fully taken hold in Northwest Indiana. We are, of course, not suggesting that Northwest Indiana has not entered the cyclical phase of recovery, only that the vitality, which one may observe in other regions of the country and which was clearly present in past Northwest Indiana recoveries, has not as yet emerged in the current phase. Income, employment and profits are rising, but at a slower pace than our models were forecasting. In other words the potential level of recovery has not yet been attained. Our non-manufacturing or so-called domestic private sector is clearly failing to respond to the national cycle. Here we are adding jobs in the hundreds when in past recoveries job addition numbered in the thousands.

An economist faced with such events tends to investigate the forces which were in action when the region was advancing more rapidly than the nation in order to determine what, if anything, is absent or less vibrant in the private domestic sector in the current, subdued recovery. Generally, when the export sector—manufacturing and steel—provides a primary money flow through its payroll and local purchases, this attracts local entrepreneurial activity which eventually maintains a momentum of its own and the economy forges ahead. One might refer to the foregoing relationship as the *entrepreneurial* multiplier.

The regional domestic sector was consistently creating new jobs throughout most of the 1960s and 1970s, rising even in periods when the export sector suffered cyclical setbacks. In 1964 the domestic sector represented 47.81% of total establishment employment; in 1979 the share was almost 63%. This rate of increase exceeded the national shift in shares of domestic versus export sectors. If the entrepreneurial multiplier is absent or weak, the primary money flow enters but subsequently washes out because purchases are made principally outside the region. These conditions were and still are quite typical of the black sub-economy and to a much lesser extent of the Hispanic sub-economy, undoubtedly due to a variety of socio-historical circumstances. However, if the primary money flow does not induce sufficient entrepreneurial activity, the so-called Keynesian income multiplier gradually peters out.

It appears, from some preliminary results of a study now underway, that entrepreneurial activity (per population) has declined in the region, particularly in Lake County and drastically in the urban areas.

The primary money flow is still robust and rising at a quarterly rate of 8.77%, an average monthly flow of 188.923 million dollars from 173.686 million the previous quarters. Steel's payroll rose an average 9.01% from 113.501 million to 123.732 million dollars. Steel companies are adding productive capacity. Lever Brothers and other chemical companies are carrying out their investment programs. There is even some relocation of plants from outside the region to Lake County (Calumet Pallet). Why, then, is there a dimunition of entrepreneurship? Here are some tentative answers:

- The traditional local pool of entrepreneurs, the Anglo-Saxon and German first and second generations, and East and South Europeans, is aging. The pool is also depleted as the offspring tend to opt for professional and corporate administrative positions.
- Qualified minorities who are potential local entrepreneurs tend to opt for high-paying public sector and corporate administrative positions.

The foregoing trade-off is exacerbated by a perception that the region offers diminishing opportunities for private enterprise and an apparent rise in risk-aversion among college-educated populations.

A possible decline in local entrepreneurship may be of more serious consequences to the Northwest Indiana Region than the recent struggles of the steel industry.

In order for economic development to proceed for each demographic cohort, there must emerge—by a process of random selection—an equilibrium number of entrepreneurs who provide employment at the margin for the incremental labor force. If the selection process fails or entry for entrepreneurs is unattractive in a given region, excess labor supply is the inevitable result, particularly if existing firms (steel, petroleum and so on), have absorbed their equilibrium labor force. Economic development groups such as are operating in

Table 1
Northwest Indiana Employment And Forecast (In Thousands)

	March 1984	*June 1984*	*September 1984*	*December 1984*	*March 1985*	*June 1985*	*September 1985*	*December 1985*
Total Employment	210.8	221.02	222.71	225.5	225.81	227.61	229.32	230.61
Export Sector: Manufacturing plus Construction	76.2	82.52	85.31	85.15	86.91	87.61	88.52	88.31
Steel Mills	46.4	49.8	50.1	50.1	51.6	51.8	52.9	52.9
Steel-Based Manufacturing Manufacturing-Steel-Petroleum	18.8	19.9	20.0	19.9	20.0	20.6	20.4	19.9
Private Domestic Sector: Non-Manufacturing less government less construction	104.4	106.8	107.2	107.4	108.3	108.2	109.9	111.3
Public Sector	28.5	31.7	30.2	30.2	30.6	31.8	30.9	31.0
Domestic Service Sector: (retail, wholesale, finance, banking, education)	91.8	94.38	95.72	96.03	96.42	97.19	99.82	99.9
Health Care	17.9	17.7	17.8	17.6	17.6	17.6	17.8	18.1

Table 2
Income And Payrolls In Billions Of Dollars; Annual Rates

	March 1984	*June 1984*	*S.ptember 1984*	*December 1984*	*March 1985*	*June 1985*	*September 1985*	*December 1985*
Personal Income	6.934	7.093	7.234	7.347	7.498	7.671	7.852	8.011
Export Sectors Payroll	2.208	2.289	2.371	2.457	2.543	2.636	2.731	2.834
Steel Payroll	1.404	1.459	1.512	1.567	1.624	1.685	1.746	1.809
Private Domestic Sector Payroll	1.963	2.041	2.038	2.117	2.194	2.275	2.279	2.282
Index of Business Activity May 1979 = 100	91.3	93.2	93.4	94.5	94.9	95.2	96.3	98.1

abundance in Northwest Indiana attempt to import entrepreneurs from outside the region in order to absorb excess labor and shore up the dwindling tax base. This is at best a difficult task and nationally it is often a zero sum game. Moreover, substitution of public entrepreneurship for private enterprise may create jobs but only at cost of inefficiency. In Table 1 we give the reported employment statistics for March 1984 in order to establish a benchmark. The remaining statistics are from our forecasts and give annualized average quarterly rates. Consequently the forecasts are smoothed values not strictly compatable with the data released by the Indiana Employment Security Division.

Otherwise, the fundamental health of the recovery can be easily substantiated by comparative data. Manufacturers' new orders for non-defense capital goods in constant 1972 dollars has almost reached its 1979 peak. The index of production of consumer durables (BCD 75) has surpassed the 1979 peak. These are just a few examples in support of our view that the local manufacturing sector has attained a pattern of steady and sustainable growth.

In sum, the recovery is on course and there is no indication that it will be derailed. The local economy is relatively stable; however, it is not fully participating in the national recovery. One might hope that the serious labor unrest which is buffeting the continental European economy will not spread to the U.S. in 1985. European strikes will somewhat relieve import pressures, but might retard global recovery, perhaps adversely affecting the U.S. economy in 1985. This would be an unfortunate turn of events inasmuch as we expect very rapid recovery of U.S. demand for heavy steel in 1985. ☐

Kokomo—Marion

Dilip Pendse

Associate Professor of Economics, Indiana University at Kokomo

How will Kokomo-Marion's economy look in the remaining 100 days of this year's presidential campaign? Very good indeed! For the first time in quite a while, the Kokomo-Marion area has ceased to be a labor surplus area. The economic recovery that began in November 1982 has been spectacular. In several sectors of the economy the pre-recession levels have been either restored or surpassed thanks to a strong upsurge in the manufacturing, housing, and retail sectors of the economy.

Last year in April, 2,184 workers at Chrysler's transmission and casting plants in Kokomo were on indefinite layoffs. In July 1984, however, the number dropped to a mere 246! Similarly, 168 workers at Kokomo's Continental Steel plant were on indefinite layoff in April '83. In July of this year, however, not one was on indefinite layoff at that plant! With more than 10,000 workers working, the number of workers on indefinite layoff has dropped below 10% of the work force at Delco. And the same story goes on and on at other factories.

Due to higher factory worker recalls, the unemployment rates have plunged in Kokomo, Marion, Logansport, and Peru areas. For example, in the Kokomo area the jobless rate stood at 7.7% in May 1984, compared to 10.7% a year ago and 17.5% two years ago. In the Marion area, May's unemployment rate was 1.2 percentage points below the 10.8% rate reached two years ago. In the Logansport area, the unemployment rate stood at 8.1% in May 1984, compared to 14.6% two years ago. Similarly, in the Peru area, the unemployment rate plunged 3.9 percentage points between May 1982-1984.

This year's first quarter's volume of economic activity in the Kokomo-Marion-Peru-Logansport area totaled $1.1 billion, up 26% from the same period a year ago. At this rate the area's yearly volume could well exceed $5 billion. In the Kokomo area alone the value of manufactured goods produced totaled $618 million during January-March 1984, up 40% from the same period a year ago. At the same time in Marion, the value of factory output during the first quarter of 1984 remained 42% higher than a year ago.

In the Kokomo area alone, the value of economic activity during the January-March period totaled $749 million, up 31% from the first quarter of 1983. Sales of new and used automobiles climbed to $27.5 million, compared to $19.3 million a year ago. Similarly, sales of furniture, home furnishings, and appliances totaled $5.12 million during the first quarter of 1984, compared to $4.12 million in 1983. Sales also rose between 5% to 10% at Kokomo's grocery stores and at drinking and eating establishments.

The housing sector, vulnerable to high interest rates, remained strong in the Marion-Kokomo area during the first six months of this year. In Kokomo 115 home mortgage loans valued at $3.7 million were granted by local lending institutions during the first quarter of 1984, compared to eighty-six loans valued at $2.7 million during the same period a year ago.

The number of construction permits issued in the Kokomo area (city plus county) was 19% higher during the first two quarters of this year than that of the same period in 1983. The value of construction permits rose to $52.43 million, up 421% from a year ago. Similar upward trends were also reported in the Marion, Logansport, and Peru areas.

Meanwhile, the Kokomo area posted a strong rebound in office construction and improvement activity. During the January-June period of this year, twenty-seven office construction and improvement permits were issued, compared to six during the same period a year ago. Also, forty single family house construction permits were issued during the first six months of this year in Kokomo, compared to thirty-seven during the same period in 1983.

In other developments, Delco unveiled a $38-million plan to construct its electronic technology center in Kokomo. Marion attracted Regal Bag Co., a producer of grocery bags. The firm's current employment of eight workers is expected to reach up to twenty by the end of this year and up to ninety in the next two years. Also, in Marion, Hubbard Milling Co., a manufacturer of livestock feed, announced an $800,000 expansion at its sites. Under General Motor's profit sharing plan, Fisher Body and Delco employees earned a hefty $10 million in excess of their regular wages.

On the negative side, about 170 workers lost their jobs due to permanent shutdown of Gas City's Container General Corporation, a glass manufacturer and the city's largest plant.

In short, the current recovery has been remarkably good to this area, thanks to a strong and stable growth in the factory output and the loosening of purse strings by consumers. A lot of kick is still left in the manufacturing sector of the economy. Consumer spending is likely to remain strong because of job security and higher incomes. This year's Christmas sale volume will post the strongest gains in recent years. Activity in the housing sector is not expected to diminish, despite fears of high interest rates. On the whole, the interaction between consumer spending and a burst of factory output is likely to keep the local economy strong through December. ☐

Lafayette

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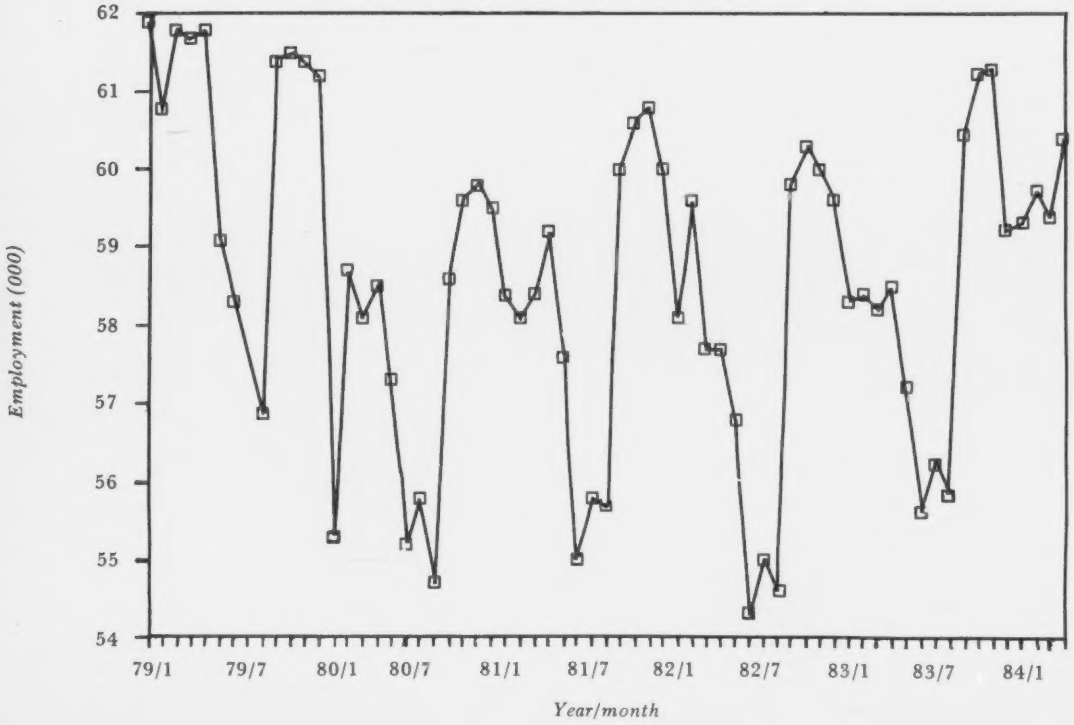
The Greater Lafayette economy continues to reflect the strength in the national economy. Employment reached its highest April level since 1979, reaching 60,400 people and employing 94% of the area's work force. Seasonal declines in employment during the summer months have left the June employment level at 54,300, 1,700 above June 1983, indicating continued strength in employment. The national recovery has been the most labor intensive in the post-WWII era, and it appears that economists will again underestimate the strength of the recovery in the second half of 1984. The average recovery period has lasted about 45 months, while periods of decline have been much shorter. Our latest recession period tied for the longest at 16 months.

Retail sales remained strong, with major retailers reporting sales gains in the high double-digit range. Consumer spending led the economy out of the recession and its force continues to drive the recovery. Employment gains in merchandise activities were offset by seasonal declines in the food and other service sectors, but declines were smaller than usual, again indicating strength in the overall economy.

The employment peak reached in April is the highest employment figure since the fall of 1981 and only 1,400 below the April 1979 employment level. Seasonal fluctuations aside, it is clear from the Figure that employment is definitely on an upward trend. Total employment in April was 3.2% higher than in April 1983. The major employment gains have come in manufacturing and the services sectors.

Bank deposits have reached record levels, 8% ahead of April 1983, while the cost of living advanced little, rising only 4.5% over the twelve-month period. Construction activity has not responded to the recovery. Employment gains were neg-

Figure
Greater Lafayette Area Total Employment



ligible in construction and building permits remain at relatively low levels. Most of the construction activity involves multi-family rental units and office space.

The outlook for the remainder of the year remains very positive. Since the Lafayette economy has not been bolstered by a strong housing recovery anyway, the loss of some activity in that sector due to rising interest rates will not be as detrimental as in other regions of the state. Some of the major heavy industry is operating at near capacity and orders have been strong. The price level is 4.5% above April 1983 levels, while incomes have grown more rapidly, increasing real purchasing power. Retail spending will remain strong through the Christmas season. Employment will continue to expand, probably exceeding 1979 levels by year-end. Overall, the outlook is for continued good times. ☐

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